

Invitation for Bids
Rescue 1
Moultonborough, NH
April 26, 2011



Joel R. Mudgett, Chairman
Board of Selectmen

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TOWN OF MOULTONBOROUGH

Invitation for Bids

Heavy Rescue Truck

Sealed bids for the provision of a Heavy Rescue Truck will be accepted until 2:00 p.m. on Thursday, April 26, 2012 in the Offices of the Select Board, 6 Holland Street, PO Box 139, Moultonborough, NH 03254 at which time they will be opened and publicly read aloud.

The general specifications are for a heavy rescue fire apparatus with a 6 man custom cab, forward and tilt design, powered with a diesel engine. The apparatus shall have a 16 to 18 foot Rescue body with transverse compartments comprised of double sided 50-70% slide out tool boards with "Pac Trac" mounting panels (or equivalent), slide out trays capable of handling loads between 500 to 1,000 lbs. Coffin style compartments shall be mounted on top of the rescue body and accessible via a ladder with one compartment containing an oil dry container with a minimum 100 lbs. capacity. A telescoping light tower, with a minimum 7 foot extension from its mounted position, a minimum 30 KW hydraulic or PTO generator with a constant mesh, compartment for an NFPA compliant, 2 bottle, 6000 psi SCBA fill station, and six UN-ISO DOT cylinders, compartment for two Hurst JL-ER 12 volt hose reels and a Hurst JL-AC-SI Full size electric Simo power unit with the Jaws and O-Cutters, pre-connected and mounted on slide out trays.

A detailed package with information on the equipment to be delivered, items to be supplied by the owner or the vendor, and accommodated within the design, the conditions thereof, and bid forms, is available at www.moultonboroughnh.gov (click on Paid, Volunteer and Contract Opportunities) or said Select Board offices during normal business hours. **A pre-bid conference will be held at 2:00 p.m. on April 17, 2012 at Moultonborough Town Hall.**

Each submitted bid should be in a sealed envelope marked, Town of Moultonborough, Heavy Rescue Truck Bid, with the due date clearly marked. If mailed, the bid submission should be in a similarly marked separate sealed envelope to protect against the actual bid being opened in error. Any questions with respect to this invitation must be received, in writing by mail (above address), by email (cterenzini@moultonboroughnh.gov), or fax (603.476.5835) by Carter Terenzini, Town Administrator, no later than 4:00 p.m. on April 19, 2011. It is the bidder's responsibility to view and account for any addendums relating to this request. These will be posted on the Town web site no later than 4:00 p.m. on April 23, 2012.

The town reserves the right to reject any and all bids, and waive any minor or non-material informalities, if deemed to be in its best interests.

Joel R. Mudgett, Chairman/s/
Board of Selectmen

Posted: Town Bulletin Boards (7)
SAU

Advertised: Meredith News & Carroll County Independent 03/29/12 & 04/05/12
Manchester Union Leader: Same Dates
Mailed: Vendors List

Scope of Work or Specifications and Conditions

1.) General Description of the Project, Materials and Quantities

The general specifications are for a heavy rescue fire apparatus with a 6 man custom cab, forward and tilt design, powered with a diesel engine. The apparatus shall have a 16 to 18 foot Rescue body with transverse compartments comprised of double sided 50-70% slide out tool boards with "Pac Trac" mounting panels (or equivalent), slide out trays capable of handling loads between 500 to 1,000 lbs. Coffin style compartments shall be mounted on top of the rescue body and accessible via a ladder with one compartment containing an oil dry container with a minimum 100 lbs. capacity. A telescoping light tower, with a minimum 7 foot extension from its mounted position, a minimum 30 KW hydraulic or PTO generator with a constant mesh, compartment for an NFPA compliant, 2 bottle, 6000 psi SCBA fill station, and six UN-ISO DOT cylinders, compartment for two Hurst JL-ER 12 volt hose reels and a Hurst JL-AC-SI Full size electric Simo power unit with the Jaws and O-Cutters, pre-connected and mounted on slide out trays.

2.) Specifications & Certification

See Exhibit A

3.) Delivery, Cost, Location and Timing

All items, as specified, are to be delivered to a location within the Town of Moultonborough as the Town may specify at the time of delivery. The cost of delivery must be contained within your bid pricing.

You must specify the number of calendar days it will take you to deliver the equipment to us from the date we give you the notice to proceed under the contract.

4.) Term of Contract

N/A

5.) General Conditions

a.) If you are in default of the delivery date a \$100 per day liquidated damages will be assessed as a credit against any final payment due you.

b.) If you are more than thirty (30) days late in delivering the equipment you will be given ten (10) days notice to cure the default. You will then have a period of ten (10) days to cure the default. If you do not do so we may cancel the contract.

c.) Any cash payment due to you will be paid ninety percent (90%) upon the date of delivery. The balance will be paid within ten (10) days of our acceptance of the equipment as specified. You will maintain a lien interest in the equipment until that time. Any portion of your bid and performance deposit remaining on deposit with us will be returned at that time.

d.) The term "days" will mean calendar days.

e.) Unless otherwise specified to be of a longer duration, you must provide the standard factory warranty as specified by the manufacturer on each and every item to be supplied.

f.) You must have a factory approved service facility within 100 miles of Moultonborough.

6.) Pre-Bid Conference, Questions, and Supplements

There will be a pre-bid conference at 2:00pm on April 17, 2012 at Moultonborough Town Hall.

Any questions with respect to this invitation must be received, in writing by mail (above address), fax (603.476.5835) or email (cterenzini@moultonboroughnh.gov), by Carter Terenzini, Town Administrator, no later than 4:00 p.m. on April 19, 2012.

***Important Note:** The answers, and any other changes or supplements to this document, will be posted on the Town web site as an Addendum no later than 4:00 p.m. on Monday, April 23, 2012. It is the bidder's responsibility to check and verify any such changes in order to account for them in their bid. You must acknowledge issued addenda on your bid form.

7.) Description, Continued Use, and Viewing of Trade-In(s)

N/A

8.) Bonding

Bidders must provide certain types of bonding from a surety company authorized to underwrite surety bonds in the State of New Hampshire with a minimum AM Best rating of "A" and acceptable to the Town in a form that will be subject to the approval of the Town. Bidders may substitute a certified check in the appropriate amount made payable to the Town of Moultonborough in lieu of a bond.

A. Bid Deposit

A bid bond or certified check in the amount of five percent (5%) of the bid to ensure that the bidder will enter into a contract and submit a performance bond with fourteen (14) days of notice of award of contract. The successful bidder's bid bond will be returned or released after a contract is executed and an acceptable performance bond has been delivered. In case of failure to comply within the stated time, the bid bond will be forfeited as liquidated damages because of the default.

The bid bond or check of all but the lowest three (3) bidders will be returned after the bids are opened and evaluated and those low three bidders are established. The bid bonds of those that are retained after this process will be returned once a contract with the lowest responsive bidder is executed.

B. Performance Bond

A performance bond in the amount of one hundred percent (100%) of the bid shall be furnished by the successful bidder within fourteen (14) days after receiving the official notice of award of contract. Failure of the contractor to perform according to the contract and specifications will be cause for the town to begin action for forfeiture of the performance bond.

The performance bond shall reference the warranty coverage and terms on the face of the bond. The Bidder's bonded warranty shall extend to the chassis and body regardless of manufacturer.

Proposals received from Bidders who do not manufacture the chassis shall provide a separate warranty which is issued jointly and severally by, both the Bidder and the chassis manufacturer. This document shall be included in the bid response package.

If the successful Bidder does not manufacture the chassis, the Bidder shall supply a separate warranty bond (in addition to their performance bond) along with their signed contract which guarantees all terms and conditions of the warranty and names, as co-principals, both the Bidder and the chassis manufacturer. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the warranty quoted in the bid.

Bidders who manufacture the chassis should provide a warranty issued in their name only.

9.) Financing

The apparatus to be acquired under this invitation shall be financed under a lease to be secured and offered by the bidder.

The Town shall make its first lease payment of \$100,000 within thirty (30) days of its receipt of the truck in a fully operational condition. Should items of correction be needed, the payment will be made within thirty (30) days of the corrections having been made and accepted by the Town.

The Town will then make four additional payments on the anniversary of the first payment in the amount to be specified in the bid.

The lease must have a standard “escape” clause which allows the Town to cancel the lease in the event the Town Meeting does not appropriate subsequent lease payments.

The lease must allow the Town to “buy-out” the balance of the payments at any time if it should so wish.

10.) Bid due Date and Methods of Delivery

Sealed bids will be accepted until 2:00 p.m. on Thursday, June April 26, 2012 in the Offices of the SelectBoard, 6 Holland Street, PO Box 139, Moultonborough, NH 03254 at which time they will be opened and publicly read aloud. Each submitted bid should be in a sealed envelope marked, Town of Moultonborough, Rescue 1, with the due date clearly marked. If mailed, the bid submission should be in a similarly marked separate sealed envelope to protect against the actual bid being opened in error.

11.) List of Five References

Provide a list of at least five references for a similar Heavy Rescue that you have constructed and equipped within the past five years. You must identify the following:

- Name of Entity purchasing the truck
- Name of Specific Contact
- Email and telephone for the contact
- Description
- Initial Contract Value
- Final Contract Value
- Description of the difference

12.) Force Majeure

Force Majeure: The time for performance hereunder shall be extended for any delay or default in performing hereunder if such delay or default is caused by conditions beyond the Contractor's control including, but not limited to Acts of God, natural disasters (earthquakes, hurricanes, floods), wars or riots, or performance failures of parties beyond the control of the Contractor (e.g., disruptions in utility services attributable to the provider or labor actions by employees of a common carrier). Such extensions shall be day for day of the delay. Such extension shall only take effect if the Contractor shall give the Town prompt written notice following their first knowing of the occurrence causing the delay. Such notice shall include the cause of the delay, the anticipated length of the delay, the alternatives that could be considered to keep the project on schedule, and the action the Contractor is taking, notwithstanding the instant matter, to otherwise honor its end delivery date obligation.

The extension shall remain in place only to the extent that, on a seven day basis, the Contractor shall update this information and show a good faith prosecution of the remainder of the work that is not dependent upon the matter causing the delay.

A dispute with copyright owners or trademark infringements, contractor labor disputes, software or server delays, the obtaining of licenses or approvals other than those of the Town, or a delay in the delivery of parts that could have been available had they been ordered at the earliest possible moment shall not be considered to be a force majeure cause for extension.

Town of Moultonborough
Rescue Truck
Bid Form
(Please Print in Ink or Type)

Name of Bidder: _____

Address: _____

Contact Person: _____

Telephone Fax

Email

ATTENTION: Mr. Joel R. Mudgett, Chairman
Board of Selectmen
PO Box 139
Moultonborough, NH 03254

Dear Mr. Mudgett:

Having examined the documentation provided with the subject Invitation for Bids the undersigned proposes to furnish the requested item or materials as requested in accordance with the subject documents.

The undersigned acknowledges Addenda # _____
(If none, write none).

If I am notified my proposal is accepted within forty five (45) days of the bids having been opened, I will execute a contract for the work within fourteen (14) days thereafter.

I propose to provide the following items for the following unit pricing:

Item

Price

1.) Bid Lease Pricing

A. Payment 1 fixed by Town

\$100,000

Item

Price

B. Payment 2

\$ _____
(In Figures)

_____ Dollars and _____ Cents
(In Words)

C. Payment 3

\$ _____
(In Figures)

_____ Dollars and _____ Cents
(In Words)

D. Payment 4

\$ _____
(In Figures)

_____ Dollars and _____ Cents
(In Words)

E. Payment 5

\$ _____
(In Figures)

_____ Dollars and _____ Cents
(In Words)

F. Total of all payments A through E

\$ _____
(In Figures)

_____ Dollars and _____ Cents
(In Words)

2.) Interest rate of financing

_____ %
(In Figures)

_____ percentage
(In Words)

3.) Total amount being financed

\$ _____
(In Figures)

_____ Dollars and _____ Cents
(In Words)

Time for Delivery: I will deliver this equipment to you within _____ days (In Figures) of your notice to proceed (exclusive of the time you take to review and approve my submittals).

I understand that the town reserves the right to reject any and all bids, and waive any minor or non-material informalities, if deemed to be in its best interests.

I understand that the Town may hold my bid for forty five (45) days prior to awarding a contract.

In order to be considered responsive each bidder must submit the following with this bid:

- 1.) Completed Exhibit A, explanation of any deviations from the specifications, and attachments of required drawings, catalog sheets warranty information and the like.
- 2.) Clerk's Certificate showing the authority of the submitting party to bind it to a contract. [This generally applies to corporations and partnerships. It is an extract from your minutes, a specific form by the Clerk of your Board of Director's or a section of your partnership agreement in which it is demonstrated that you have the authority to submit the bid and the authority to sign a contract if offered to you.]
- 3.) Bid and Performance Deposit Certified Check in the amount of 5% of the bid [rounded up to the next whole \$100.00 increment].
- 4.) History of Firm.
- 5.) Location of site at which truck will be manufactured.
- 6.) Name & Location of firm providing regular service.
- 7.) Reference List

I certify, under the penalties of perjury, that (1) I have had an opportunity to view the full bid package and am aware it was my responsibility to perform my own due diligence appropriate to submitting this proposal, (2) I am fully authorized to submit this bid, (3) I have not engaged in discussions, negotiations, or collusion with any person to determine what my bid will be and (4) that I, to the best of my knowledge and belief, have paid all taxes, fees, assessments, betterments or other municipal charges that I owe to the Town of Moultonborough or have payment agreement in place or have filed an appeal over the same.

Signature of Bidder

Corporate
Seal

Title of Bidder

Signed this _____ day of _____, _____.

Exhibit A – Specification Checklist for Item # 1

The general specifications are for a heavy rescue fire apparatus with a 6 man custom cab, forward and tilt design, powered with a diesel engine. The apparatus shall have a 16 to 18 foot Rescue body with transverse compartments comprised of double sided 50-70% slide out tool boards with “Pac Trac” mounting panels (or equivalent), slide out trays capable of handling loads between 500 to 1,000 lbs. Coffin style compartments shall be mounted on top of the rescue body and accessible via a ladder with one compartment containing an oil dry container with a minimum 100 lbs. capacity. A telescoping light tower, with a minimum 7 foot extension from its mounted position, a minimum 30 KW hydraulic or PTO generator with a constant mesh, compartment for an NFPA compliant, 2 bottle, 6000 psi SCBA fill station, and six UN-ISO DOT cylinders, compartment for two Hurst JL-ER 12 volt hose reels and a Hurst JL-AC-SI Full size electric Simo power unit with the Jaws and O-Cutters, pre-connected and mounted on slide out trays.

For each and every item you must check if your proposal meets or deviates from the specifications. If your proposal deviates from the specification you must attach an explanation, identifying the section number (i.e. I.A.; II.B. etc.) and following in order, as to how you deviate together with any explanatory catalog sheets or similar documentation.

PROPOSED SPECIFICATIONS: Heavy Rescue

I.	Origin of Manufacturer The complete apparatus shall be manufactured within the continental United States. Vehicles manufactured outside of the continental United States shall not be considered. No exceptions will be permitted to this section of the document.	<u>Meets</u>	<u>Deviates</u>
II.	Established Manufacturer Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in continuous business for a minimum of thirty-five (35) years. A written chronological history of the bidder shall be included in the bid response package. Such history shall show the date of commencement of business, the date of each major expansion or change in ownership and the date of each bankruptcy for other major financial event. Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified, and shall state the location of the factory where the apparatus is to be built. They shall also show that they are able to furnish replacement parts for said apparatus including a complete part stock for the apparatus, to include windshields, doors, door hardware, dash instruments, engine and transmission parts, bumpers, etc. which must be kept in stock at the bidders manufacturing facility. There shall be no exception to these requirements.	<u>Meets</u>	<u>Deviates</u>
III.	Service Capability Each bidder shall have a factory authorized service representative within a 100 mile radius of the Town.	<u>Meets</u>	<u>Deviates</u>

IV.	Overall Intent	<u>Meets</u>	<u>Deviates</u>
	<p>Details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all non-specified features. The completed vehicle shall conform to the requirements of the National Fire Protection Association Pamphlet No. 1901, latest edition, for Motor Fire Apparatus, and shall exceed 1901 where specified herein for all applicable equipment noted.</p> <p>When evaluating bids, the importance of reduced life cycle costs and public safety associated with fire fighting apparatus shall be a major consideration and all evaluations shall exclude vehicles of a type that deviate from these specifications.</p> <p>Apparatus with a design that utilize a commercial bus or truck chassis with the installation of a custom cab will not be accepted.</p> <p>The workmanship must be of the highest quality in its respective field. Special consideration shall be given to the following points:</p> <ol style="list-style-type: none"> 1) Accessibility of the various components which require periodic maintenance or lube checks. 2) Ease of vehicle operation. 3) Visibility of the driver. 4) Features supplied that are beneficial to the intended operation of the completed apparatus. <p>Construction must be rugged and design must be certified to carry the loads as specified and to meet the road requirements and speed conditions as set forth under "Performance Test and Requirements".</p> <p>Welding shall not be employed in the assembly of the completed vehicle in a manner that shall prevent the removal of a major component part for service and/or repair.</p> <p>These specifications have not been established to preclude any bidders. However, the Town does not intend to make a decision solely based upon lowest price but intends to purchase an apparatus that meets the intentions, service, and needs of the Town.</p>		

<p>V.</p>	<p>Road Test Certification</p> <p>A road test shall be conducted with the finished apparatus fully loaded. During this time, the apparatus shall not show loss of power and/or overheating. The transmission driveshaft or shafts and rear axle shall run free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, shall have not less than 25% or more than 45% of the weight on the front axle and not less than 55% or more than 75% on the rear axle.</p> <p>A. The apparatus must be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed RPM of the engine.</p> <p>B. The apparatus must be capable of accelerating from a steady speed of 15 mph to a true speed of 35 mph within 30 seconds. This shall be accomplished without moving the gear selector.</p> <p>C. The fully loaded apparatus shall be capable of obtaining a speed of 60 to 65 mph on a level paved highway.</p> <p>D. The manufacturer shall furnish copies of the engine installation approvals signed by the appropriate engine company upon delivery of the apparatus to the Town. No exceptions will be permitted to this section of the document.</p> <p>E. The manufacturer shall furnish copies of the transmission approval signed by the transmission manufacturer upon delivery of the apparatus to the Town. No exceptions will be permitted to this section of the document.</p> <p>F. The manufacturer shall furnish copies of the front and rear axle approvals upon delivery of the apparatus to the Town. No exceptions will be permitted to this section of the document.</p>	<p><u>Meets</u></p>	<p><u>Deviates</u></p>
<p>VI.</p>	<p>Road Test Failure</p> <p>In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the manufacturer within thirty (30) days of the first trials. Such trials shall be final and conclusive and failure to comply with changes as the Town may consider necessary to conform to any clause of the specifications within thirty (30) days after notice is given to the manufacturer of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any</p>	<p><u>Meets</u></p>	<p><u>Deviates</u></p>

	building owned or occupied by the Town, or its use by the Town during the above specified period with permission of the manufacturer, shall not constitute acceptance.		
VII.	Liability The bidder, if his bid is accepted, shall defend any and all suits and assume all liability for use of any patented process, device, or article forming a part of the completed vehicle or any appliance under the contract.	<u>Meets</u>	<u>Deviates</u>

Moultonborough Fire-Rescue Department Specifications for Custom Chassis Heavy Rescue Fire Apparatus	Bidder Complies	
	Yes	No
<p><u>INSPECTION TRIP</u></p> <p>One (1) inspection trip for up to four (4) Town personnel shall be made to the manufacturer's facility during the course of construction of the apparatus. Air travel (for distances over 250 miles), meals, and lodging expenses shall be included.</p> <p><u>APPARATUS FAMILIARIZATION</u></p> <p>Town personnel shall be instructed as to the use of the entire apparatus including, but not limited to, chassis, fire pump system, the apparatus, and supplied equipment.</p> <p>The familiarization specialist shall remain at the Town for two (2) days (not less than eight (8) hours), to provide instruction to all personnel, or as instructed by Chief of the Department. All meals, motel, and travel costs shall be the responsibility of the successful bidder.</p> <p><u>DELIVERY REQUIREMENTS</u></p> <p>Delivery of the completed vehicle shall be no more than one hundred eighty (180) calendar days after acceptance of the formal contract by the successful bidder.</p> <p>The manufacturer shall specify in his bid the number of calendar days after acceptance of the formal contract that the completed vehicle shall be delivered to the Town.</p> <p>Information required at time of delivery to be supplied by the manufacturer:</p> <p>A. Line set ticket showing parts used by the manufacturer in construction of the apparatus.</p> <p>B. Electrical "as built" schematic booklet.</p> <p>C. Air system "as built" schematic booklet.</p> <p>D. Final build data sheet showing serial numbers for the following:</p> <ol style="list-style-type: none"> 1) Cab and chassis Vehicle Identification Number 2) Engine 3) Transmission 4) Front axle 5) Rear axle(s) 6) Each tire showing mounting location on the chassis. 7) Apparatus Serial Numbers <p>E. Final build measurement data sheet showing the following:</p> <ol style="list-style-type: none"> 1) Bumper extension 2) Wheelbase 3) Rear overhang 4) Cab measurements for the ground to the bottom of the cab at all four corners and the frame to cab extreme at the frame height for all four corners of the cab. 5) Suspension measurements for the ground to the top of the frame at the centerline of the front axle and the centerline of the rear axle or centerline of the tandem axles. 6) Overall Height, Length, and Width of completed body. 		

F. Unless otherwise specified, a minimum of one (1) copy of complete, as delivered apparatus and chassis operation and general maintenance instructions including, but not limited to the chassis, engine, transmission, axles, and lubrication charts shall be supplied.

CHASSIS WARRANTY

The manufacturer shall warrant the entire apparatus proposed, manufactured and/or assembled by them to be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of delivery to the Town. Each bidder shall submit with their proposal a copy of the warranty to be furnished.

CAB WARRANTY

The manufacturer shall warrant that the cab proposed shall not be structurally damaged inside or out by rust and/or corrosion for a period of ten (10) years. Each bidder shall submit with their proposal a copy of the warranty to be furnished.

FRAME WARRANTY

The manufacturer shall warrant the proposed frame against structural failure from bending or cracking for the entire period the chassis is owned by the original Town or end-user. Each bidder shall submit with their proposal a copy of the warranty to be furnished.

OTHER WARRANTIES

Applicable extended warranties for certain major components such as the axles, engine, transmission, apparatus body, and related components, etc. shall be provided as noted elsewhere in the specifications.

SINGLE SOURCE MANUFACTURER

Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source shall be "a manufacturer that designs and manufactures their products using an integrated approach, including the cab and chassis, and apparatus body being fabricated and assembled on the bidder's premises". The warranties relative to the chassis and body design (excluding component warranties such as engine, transmission, axles, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body and chassis). The bidder shall provide evidence that they comply with this requirement. No exceptions will be permitted to this section of the document.

TREATMENT OF BID EXCEPTIONS

It shall be mandatory for any prospective bidder that deviates from the proposed specifications to give a full description of all deviations.

When the bidder checks the "yes" column in the bid the bidder is making testimony that the bidder is in full compliance with the entire paragraph.

Where bidder's specifications and/or construction differ in any way from the bid specification, a full and complete description in specification shall be required. Drawings shall also be required to show alternative construction methods. Partial descriptions, or general clarifications covering groups of sections of the specification, shall be unacceptable and shall be cause for complete rejection of the bid.

Proposals taking total exception to the purchase specifications contained herein shall not be accepted and the bidder's proposal shall be deemed non-responsive and treated accordingly.

SPECIAL NOTE ON SUBSTITUTIONS

Where a subassembly manufacturer's name or "brand" name for a product is given in a specification description, the product identified is the desired product to use. Manufacturers using a product other than the named product must take an exception to the paragraph. Where the words "or equal" are used in a paragraph in reference to an identified product, an apparatus manufacturer can make an equal product substitution without taking an exception to the specification paragraph.

Each bidder is encouraged to provide descriptive literature with their bid packet on any equipment or features that are proposed in lieu of those named and/or described in the specifications. Literature shall be originals and will be retained by the department for evaluation purposes.

BID CLARIFICATIONS

Each clarification shall refer to the bid specification page number and paragraph. Any such clarification that appears vague or misleading shall be considered an exception. Complete clarifications are required describing the reason for the deviation. The completed vehicle shall be inspected upon delivery for compliance with specifications. Deviations shall not be tolerated and shall be cause for rejection of the cab and chassis unless they were originally listed in the bidder's proposal.

BID DOCUMENTS REQUIRED

The bidder shall utilize this document in its bid. The bidder shall indicate opposite each item if they comply with that paragraph by checking "yes" or "no"

The bidder shall provide detailed information on the materials to be used to construct all parts of the apparatus. A bidder's use of terms such as "intent" are considered vague and unacceptable responses will disqualify the bid.

Copies of the bid document electronically reproduced used as a response specification are grounds for immediate disqualification of the bidder's submission.

No exceptions will be permitted to this section of the document.

DETAILED DRAWINGS REQUIRED

The bidder shall submit two (2) copies of D-size (full size) engineered construction drawings with its bid. No bids will be considered without complete engineered construction drawings submitted with the bid. Submitted drawings must be specifically for the proposed apparatus and depict all major specified components. These drawings shall show the following minimum views: front view; street side with proposed chassis; curbside with proposed chassis; rear view; top view with proposed chassis; Coffin compartment height, and approach and departure angle.

The drawings shall contain the dimensions for the overall length (in feet and inches), overall height (in feet and inches), wheelbase, angle of approach, angle of departure, overall width of the apparatus.

Submission of "similar to" or "standard" drawings, or statements referencing submission of drawings after award of contract, will disqualify the bid.

No exceptions will be permitted to this section of the document.

TURNING ABILITY DRAWING REQUIRED

The bidder shall supply with the bid an engineering drawing that provides a top view of the apparatus with the following turning ability information listed in decimal feet: SAE turning radius,

curb to curb radius, and bumper swing radius, inside radius. The calculations must be performed according to SAE J-695.

No exceptions will be permitted to this section of the document.

ACCEPTABLE APPARATUS DIMENSIONS

Overall Length: Not to exceed 31' (372")

Overall height: Not to exceed 10'6" (126")

Wheel base: Not to exceed 197"

Cab to axle: Not to exceed 137"

Angle of approach: Not less than 12 degrees

Angle of departure: Not less than 12 degrees

CONTRACT AWARD

The contract shall be awarded to the lowest most responsive and qualified bidder. Since the complete vehicle materials specified are commercially available, these specifications shall in no way be considered proprietary. Each bidder shall submit on his proposal page a single line item price for all items listed in the specifications. Price shall be based on payment upon receipt of the accepted complete vehicle by the Town. No discounts, options, or prepayment schedules shall be listed on the proposal page. All such items shall be listed on a separate page entitled OPTIONS and may or may not be considered at the discretion of the Town.

VEHICLE SUPPORT DOCUMENTATION

For long term support of the vehicle and in order to provide proper maintenance, the following information shall be required with the delivery of the vehicle. It may be required to have this information provided during the bid process to ensure that the proper information is available from a potential vendor. Failure to provide this information in the exact requested format as a minimum shall be cause for rejection of the bid. Three-ring binders filled with vendor catalogs being supplied as maintenance and operation manual shall not be acceptable under the conditions of this bid.

This vehicle shall be in operation for a minimum of twenty (20) years. Fiscal responsibility of the vehicle extends beyond the initial cost of the apparatus. Reducing service and maintenance costs of the vehicle during its useful life is a major consideration in the purchase of this apparatus. The requested documentation shall be utilized to properly train personnel for operation of the vehicle and to develop proper preventative maintenance programs to reduce operating cost of the vehicle.

With delivery of the vehicle, the following information shall be provided in electronic format. The format shall be such as to provide hyperlinks to major categories and/or subjects from a content page. A word search engine shall provide quick transport of the user to any area within the document when a keyword or phrase is found. The entire manual shall be able to be printed from the electronic media to paper form. The manual must be compatible with both PC and Mac operating systems.

An electronic Operator's and Maintenance Manual shall be provided. This manual shall encompass complete information for the vehicle and vehicle systems including all accessories and/or options.

The Operator section of the manual shall describe each component, gauge and switch with proper operation and operational warnings.

The Maintenance section of the manual shall provide proper maintenance of the vehicle for all systems and components supplied.

<p>A Lubrication section shall be provided in the manual. This section shall provide all lubricant types and capacities for the vehicle. Included in this section of the manual shall be lubrication diagrams to visually locate the lubrication points of the vehicle.</p> <p>An electronic Electrical System Manual shall be provided. This manual shall provide complete wiring schematics for the vehicle.</p> <p>The manual shall be provided with diagrams of the vehicle showing the wiring harness routing within the vehicle. Each of these diagrams shall include the connectors between the harnesses that provide a hyperlink to a drawing of the actual connector where pin functions can be examined.</p> <p>Schematics for each system of the vehicle shall be provided with hyperlinks to the connectors for pin designations and to the vehicle drawings for harness location within the vehicle.</p> <p>An electronic Air System Manual shall be provided. This manual shall provide complete air system schematics for the vehicle. The manual shall be provided with diagrams of the vehicle showing the air tubing routing within the vehicle.</p> <p>Schematics for each system of the vehicle shall be provided with hyperlinks to the air tanks and valves and to the vehicle drawings for exact location within the vehicle.</p> <p>Additional documentation to be provided:</p> <p>A vehicle build sheet shall be provided. This build sheet shall include the major assemblies used in construction of the vehicle. Final inspection data including the serial numbers of the engine, transmission, axles, and tires equipped on the vehicle.</p> <p><u>SUBMISSION OF BID REQUIREMENTS</u></p> <p>Bids shall be submitted in accordance with the following instructions:</p> <ol style="list-style-type: none"> 1. This exhibit shall be completed and returned with the appropriate "yes" or "no" marked by each paragraph in the "Bidder Complies" column. A paragraph indicated with both the "yes" and "no" column unmarked or marked shall be considered non-responsive and treated accordingly. 2. Each bidder shall submit their own proposal specifications, detailing their construction. This is necessary to evaluate each bidder's actual intent of building the equipment as specified herein. The bidder's proposal format shall be the same order as these specifications to allow the Town to compare all bids easily and prevent confusion. Failure to comply shall be cause for rejection of the bid. 3. Each bid shall include the weight ratings, wheelbase, principal dimensions, transmission and axle ratios, and a certified brake horsepower curve showing the maximum no load governed speed of the engine proposed. 4. Failure to submit detailed information or drawings where specified herein shall result in rejection of the bid. 5. Bids shall be returned in a sealed envelope clearly marked "BID FOR FIRE APPARATUS". Facsimile bids are not acceptable. 6. Verbal bids and changes in the bid price after the bid opening prior to award shall not be allowed. Any such attempt shall not be accepted and cause immediate rejection of the entire bid. 		
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ORIGIN OF MANUFACTURER

Any manufacturer submitting a proposal or bid to these specifications shall meet the following conditions:

1. The manufacturer of the apparatus herein specified shall be wholly owned (100%) and managed by a company, corporation and/or parent company that is wholly based and permanently resides in the United States of America.
2. Any proposal, bid or response to these specifications by any foreign based, owned or managed (in part or in whole) company, corporation and/or parent company, shall be cause for immediate rejection.
3. Any proposal, bid or response to these specifications by any company, corporation and/or parent company, that is owned, operated, managed or held in contract, in part or wholly by a foreign interest partnership or other agreement, shall be cause for immediate rejection.

There shall be no exception to these requirements.

NFPA 1901-2009

The National Fire Protection Association "Standard for Automotive Fire Apparatus, 2009 Edition, is hereby adopted and made a part of these specifications, the same as if it were written out in full detail, with the exception of the section dealing with "Equipment Recommended for Various Types of Apparatus". Bidders shall provide the equipment specifically requested herein and the buyer shall supply the rest before the apparatus is put into service.

CUSTOM CHASSIS - SINGLE SOURCE MANUFACTURER

The chassis shall be designed and manufactured by the apparatus builder in the manufacturer's facility. The manufacturer shall demonstrate evidence of manufacturing similar custom vehicles for at least thirty-five (35) years.

Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source shall be "a manufacturer that designs and manufactures their products using an integrated approach, including the cab and chassis, and apparatus body being fabricated and assembled on the bidder's premises". The warranties relative to the chassis and body design (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body and chassis). The bidder shall provide evidence that they comply with this requirement. No exceptions will be permitted to this section of the document.

The apparatus shall be designed and manufactured for heavy duty fire service with adequate strength and capacity for all components as detailed within these specifications.

CHASSIS FRAME

The frame shall be designed to industry standards. The manufacturer shall provide a life time frame side rail warranty to the original Town of the chassis.

The frame side rails shall be 110,000 psi minimum yield

To insure the maximum clamp load for the fastener prevailing torque the cross members shall be bolted in place using grade 8 bolts, hardened washers, and grade C distorted thread locknuts. Flanged head fasteners shall not be acceptable. The top of the frame rails shall be free of bolt heads.

Frame engine cutouts shall be made with a plasma torch to minimize the heat affected zone of the cut. All cutouts shall have a minimum of 6 inch transitions between rail flange cut depths to reduce the stress concentrations throughout the cutout area. The root of all transition areas shall have a minimum of a 2 inch radius to reduce stress concentrations at the root.

The frame rails shall be powder coated prior to chassis painting to reduce the effect of harsh road chemicals.

CROSSMEMBERS

In addition to the rear cab support cross member there shall be a main frame cross member mounted in the rear cab area. Every frame cross member shall be bolted in place using grade 8 bolts, hardened washers, and grade "C" distorted thread locknuts.

FRONT AXLE

The front axle shall be a MERITOR model "MFS-18-133A-N" with an 18,740 lb. capacity.

CRAMP ANGLE

The chassis shall have a turning cramp angle of 52-degrees. Both left and right turns have a full 52° cramp angle with tires and wheels mounted on the axle and installed in the chassis. The 52° cramp angle is achieved irrespective of options.

FRONT AXLE OIL SEALS

The front axle shall be equipped with oil bath type oil seals as supplied on the axle from the axle manufacturer. The spindles shall be equipped with transparent covers for oil level inspection.

FRONT AXLE BRAKES

The front brakes shall be Cam-Master Q Plus, 16-1/2" X 6" S-Cam, air operated heavy duty brakes with automatic slack adjusters.

FRONT SUSPENSION

The front suspension shall be a pin and shackle design. Front springs shall be a minimum of ten (10) leaf elliptical type, 53" x 3-1/2" x .499" forged steel. The front springs shall have a military wrapper for safe operation. For a smooth ride the spring rate shall not exceed 3,000 lbs/in deflection.

All front spring pins shall be ground heat treated steel with grease fittings for lubrication.

The entire front suspension shall be designed for heavy duty custom fire apparatus with a capacity at ground of 18,740 lbs. Double acting hydraulic shock absorbers are to be installed.

STEERING SYSTEM

The steering shall be equipped with a single SHEPPARD M110 integral power steering gear. A remote steel reservoir shall be provided with the ability to check the fluid level when the cab is in the lowered position.

FRONT TIRES

The front tires shall be 315/80R22.5-20PR (L) GOODYEAR G-287 MSA all weather tread, tubeless radial tires...

ALUMINUM WHEELS

Two (2) polished aluminum wheels shall be supplied and installed on the front axle. The wheels shall be highly polished on the outboard side.

WHEEL TREATMENT

The aluminum wheels shall be supplied with wheel treatment for a bright finish and wheel protection.

FRONT WHEEL TRIM

The front axle shall be trimmed with mirror finish, 304L grade, non-corrosive stainless steel 'baby moon' hub caps with an opening for viewing the oil seal cover, and bright finished nut covers.

SINGLE REAR AXLE

The rear axle shall be a MERITOR model "RS-25-160" with a 27,000# capacity for the fire service.

DRIVER CONTROLLED DIFFERENTIAL LOCK

The rear axle shall be supplied with a MERITOR driver controlled differential lock. The differential lock shall be operated by an air-actuated shift unit.

The air control valve shall be provided on the Driver's dash panel complete with a light to indicate when the differential is in the locked position.

REAR AXLE BRAKES

The rear brakes shall be Cam type, 16-1/2" X 7", S-Cam; air operated heavy duty brakes automatic slack adjusters.

VEHICLE TOP SPEED

The rear axle shall be geared for a top speed of 62 to 65 mph at engine governed RPM. manufacturers utilizing higher speed gear ratios and electronic speed limiting will be unacceptable

SINGLE AXLE REAR SUSPENSION

The rear springs shall be a minimum of seventeen (17) main including four (4) auxiliary leaves. The rear suspension shall have a rating of 27,000 lbs. Capacity. The rear suspension shall be a "self-leveling" slipper type with a main torque leaf that contains a military wrapper. The torque leaf shall contain a bronze bushing for long service life.

Two (2) main frame cross members shall be mounted in the rear suspension area, bolted to the frame rail as a rear suspension support member. Each cross member shall be a wide base flanged design to provide frame spacing and to prevent frame paralleling. Each cross member shall be bolted in place using grade 8 bolts, hardened washers, and grade "C" distorted thread locknuts.

REAR SHOCKS

Dual heavy duty shock absorbers shall be installed on the rear suspension.

TIRE CHAINS

The rear axle shall be equipped with an ON-SPOT automatic tire chain system. The driver's dash shall have an electric control switch, clearly labeled for operation of the tire chains. The switch

shall be provided with a guard to prevent accidental deployment of the tire chains.

AIR SYSTEM

An air brake system meeting the requirements of the FMVSS-121 shall be provided. The system shall consist of three (3) reservoirs with a 4,362 cu. in. volume. The air system shall consist of the following components:

Dual air system with dual gauges and a warning light and buzzer.

Spring actuated parking brake built into the rear axle brakes with a manual control and warning light in the cab. These shall automatically apply in case of air system failure. A mechanical means of releasing the spring brake shall be provided in the event of total loss of air pressure.

This system shall be a quick build up system shall be provided, capable of building enough air pressure to release the brakes in less than thirty (30) seconds, when starting with the entire air system at zero pounds pressure.

The brake system shall be a split system. One system serving the rear brakes and one system serving the front brakes. The two systems shall be connected with a double check valve that shall automatically shuttle air from the front system to the rear system should loss of air pressure occur. This system shall also modulate the amount of air so the spring brakes shall apply in direct relationship to the amount of pressure applied to the treadle valve.

The brake system shall be equipped with a Bendix SR-1 valve to provide modulated spring brakes in the event there is low air pressure in the rear axle air supply reservoir.

The spring brakes shall be piped in such a manner that if the treadle valve is depressed while the spring brakes are applied, the spring brakes shall release and remain released as long as the treadle valve is depressed. They shall reapply immediately when the treadle valve is released.

The piping in the air system shall be HD nylon reinforced color coded tubing for all stationary lines.

AIR DRYER

The air system shall include a BENDIX AD-SP air dryer.

The air dryer shall incorporate an integral turbo cutoff valve.

A 12 volt thermostatically controlled heated moisture ejector shall be an integral part of the air dryer.

MANUAL AIR TANK DRAINS

All air reservoirs shall have manual 1/4 turn drain valves. The drain valves shall be supplied with rubber seats to reduce air system leaks.

AIR INLET / OUTLET

An outside air system inlet/outlet connection shall be provided and mounted in the driver's cab step area. A pipe thread frame coupling shall be provided with 1/4" npt threads. The Town shall install the appropriate female hose quick connect fitting for proper operation.

AIR AUTO-EJECT

The chassis shall be equipped with a KUSSMAUL automatic air line disconnect. A Kussmaul

weatherproof adapter kit shall provide a recessed mounting for the Air Eject. A self closing, yellow, weatherproof cover shall be used to provide a water-tight seal for the Air Eject.

The Auto Air Eject assembly shall be mounted on the exterior of the cab behind the driver's door.

MERITOR/ROCKWELL/WABCO ABS BRAKE SYSTEM

A four channel, single rear axle model, MERITOR/ROCKWELL/WABCO ABS Braking System shall be supplied.

This ABS system shall be a 4S/4M system with four (4) wheel speed sensors and four (4) modulator valves.

If a fault occurs in one wheel, that wheel shall have normal (non-ABS) brake function. The other wheels shall continue to provide the ABS function. If the ABS system should fail completely, the brake control shall be returned to normal (non-ABS) braking. An ABS warning light shall be installed on the driver's dash message center. The light shall illuminate to warn of an ABS system failure and shall illuminate when the diagnostic function is activated.

DEEP MUD/SNOW SWITCH

The ABS system shall be supplied with deep mud and snow switch.

MERITOR/WABCO STABILITY ENHANCEMENT SYSTEM

A Meritor / Wabco Roll Stability Control (RSC) System shall be provided on the apparatus chassis. The RSC shall assist in managing road conditions that may result in a vehicle rollover.

The RSC shall intervene to regulate the vehicle's deceleration functions. By automatically reducing engine torque, engage the vehicle retarder and apply pressure to the brakes.

This system shall conform to the requirements of NFPA-1901

REAR TIRES

The rear tires shall be 12R22.5-16PR (H) GOODYEAR UNISTEEL G622 RSD traction tread, tubeless radial tires.

ALUMINUM WHEELS

Four polished aluminum wheels shall be supplied and installed on the rear axle. The wheels shall be highly polished on the outboard side.

WHEEL TREATMENT

The aluminum wheels shall be supplied with wheel treatment for a bright finish and wheel protection.

REAR WHEEL TRIM

The rear axle shall be trimmed with mirror finish, 304L grade non-corrosive stainless steel "Lincoln Hat" hub cover and bright finished nut covers.

LASER ALIGNMENT

The chassis shall have a laser alignment performed at the factory before delivery.

Cramp Angle - Cramp angle is set to achieve the greatest turning radius possible. Each front wheel is set to zero degrees. The wheel is then turned until it reaches the steering stops. This measurement is the cramp angle.

TIRE PRESSURE MONITORING DEVICE

Each tire installed on the apparatus shall be equipped with a tire pressure monitoring device. The device shall consist of a valve stem cap with an LED tire alert to indicate tire pressure conditions. The LED will flash when the tire drops 8 psi below the factory setting.

DIESEL ENGINE

The chassis shall be powered by a Cummins diesel engine as described below:

MODEL:	ISL9-400
RATED BHP:	400 hp @ 2100 RPM
TORQUE:	1250 lb-ft @ 1400 RPM
GOVERNED RPM:	2200

Standard Equipment on the engine to include the following:

OIL FILTER:	A full flow / by-pass combination
LUBE OIL COOLER:	High efficiency non-drain back full flow cooling
FUEL FILTERS:	Two fuel filters providing 3 / 10 micron absolute filtration
STARTER:	A DELCO, 12 volt, 39 MT-HD starter motor
AIR COMPRESSOR:	A Wabco 18.7 cfm compressor shall be provided
AIR CLEANER:	Farr or equal with fresh air intake

ENGINE COOLANT RADIATOR

The engine coolant radiator shall have sufficient capacity to perform under the engine manufacturer installation requirements. The chassis manufacturer shall demonstrate the ability to meet this requirement with the submittal of an approved EPQ to the Town for the apparatus.

The bottom tank of the radiator shall have a drain valve for coolant removal.

The bottom tank of the radiator shall have a transmission cooler with a plate-type design.

The radiator system shall be pressurized with a cap rated per the cooling system requirements of the engine manufacturer.

The engine fan shall be encompassed with a radiator shroud to provide the proper air flow from the fan blade to the radiator. The perimeter of the radiator shall have recirculation baffles to eliminate the possibility of recirculation of "hot" air to the face of the radiator core. The bottom of the radiator shall have a recirculation baffle from the radiator to the frame rails.

COOLANT RECOVERY SYSTEM

A coolant recovery system shall be installed on the chassis. This tank is designed to capture coolant overflow when the engine coolant warms and expands. As the engine cools the overflow is then pulled out of the tank and back into the radiator, thus maintaining proper coolant levels.

CHARGE AIR COOLER RADIATOR

The engine charge-air cooler shall have sufficient capacity to perform under the engine manufacturers installation requirements. The chassis manufacturer shall demonstrate the ability to meet this requirement with the submittal of an approved EPQ to the Town for the apparatus. The charge-air cooler shall be mounted directly in front of the engine coolant radiator. To reduce

<p>vibration rubber "iso" mounts shall be used for mounting of the charge-air cooler to the engine radiator.</p> <p>The charge air piping between the engine and charge-air cooler shall be aluminum tubing with a wall thickness of .065 inch. The system shall utilize four (4) ply silicone rubber woven Nomex hoses with stainless steel pressure bands. All clamps used on the charge air piping are to be stainless steel constant torque and shall be installed at each joint.</p> <p><u>COOLANT</u></p> <p>The coolant system shall contain an ethylene glycol and water mixture to keep the coolant from freezing to a temperature of -34 degrees F.</p> <p><u>COOLANT HOSES</u></p> <p>The entire chassis cooling system shall have premium rubber hoses. All clamps to be stainless steel worm drive type clamps.</p> <p><u>HEATER LINE SHUT OFF VALVES</u></p> <p>The cab heater circuit shall have quarter turn shut off valves installed on both the supply and return lines to allow a complete shut off of coolant flow to the cab heaters. These valves shall be installed in addition to the valves in the heater units.</p> <p><u>RADIATOR SKID PLATE</u></p> <p>To protect the radiator a 1/4 inch thick steel skid plate shall be installed under the radiator.</p> <p><u>ENGINE DRAIN PLUG</u></p> <p>A magnetic drain plug shall be installed in the engine oil pan.</p> <p><u>ENGINE BRAKE</u></p> <p>A "JACOBS" Engine Brake shall be supplied.</p> <p>The Driver's dash shall include engine brake control switches.</p> <p>The transmission shall be programmed to operate in the pre-select downshift mode to maximize the retarding power of the engine brake.</p> <p>The brake lights shall illuminate when the Jacobs Brake is in operation.</p> <p><u>ENGINE FAST (HIGH) IDLE</u></p> <p>The chassis shall be equipped with an Electronic Idle Control.</p> <p>The fast idle provision shall only function when the parking brake is set and the transmission is in neutral. Manual selection of the fast idle shall be controlled by a driver's momentary switch.</p> <p>Automatic activation of the fast idle shall occur when a low voltage condition exists, the truck is in neutral and the parking brakes are applied.</p> <p>Cancellation of the fast idle shall be achieved by resetting the manual switch or by depressing the service brake pedal.</p> <p><u>CORROSION INHIBITOR</u></p>	
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<p>Corrosion inhibitor shall be provided as an additive to the chassis cooling system.</p> <p><u>SPARK ARRESTOR</u></p> <p>A spark arrestor shall be installed in the chassis air intake system. This arrestor shall be mounted behind the intake grille to filter out airborne embers.</p> <p><u>HORTON FAN</u></p> <p>A HORTON fan clutch shall be installed on the engine. A manual switch shall be provided in the dash, to over ride the fan control in event of fan failure or conditions that may result in overheating of the engine.</p> <p><u>EXHAUST SYSTEM</u></p> <p>The exhaust pipe shall be supplied with a heat wrap. The wrap shall extend from the engine turbo charger to just below the frame rail. The exhaust tubing from the turbocharger to the exhaust after treatment device shall be stainless steel.</p> <p><u>CUMMINS AFTERTREATMENT SYSTEM</u></p> <p>The chassis shall be equipped with a Cummins exhaust after treatment system in compliance with EPA 2010.</p> <p><u>TAILPIPE</u></p> <p>The tailpipe shall extend from the exhaust muffler to the rear of the vehicle making a 90° bend to exit the vehicle ahead of the rear tires on the curbside of the vehicle. The end of the pipe shall be cut square or perpendicular to the exhaust pipe centerline.</p> <p>An exhaust gas diffuser shall be furnished on the end of the tailpipe.</p> <p><u>DIESEL EXHAUST FLUID SYSTEM</u></p> <p>The chassis shall be equipped with a 5 gallon (DEF) reservoir system. The reservoir shall contain a Multifunctional Unit that contains integrated level and temperature sensors. The MFHU also shall contain a coolant powered heater to thaw DEF in conditions below 12°F (-11°C) to meet governmental regulations. The reservoir shall be located on the left frame rail behind the front axle beneath the cab. The mounting system shall use stainless steel mounting brackets to reduce the possibility of corrosion.</p> <p><u>TRANSMISSION</u></p> <p>The transmission shall be an Allison 3000EVS automatic transmission with electronic controls.</p> <p><u>TRANSMISSION COOLER</u></p> <p>An automatic transmission cooler shall be provided as an integral part located in the bottom tank of the radiator. The cooler shall be of sufficient size to maintain the operating temperature within the recommended limits of the transmission manufacturer.</p> <p><u>TRANSMISSION DRAIN PLUG</u></p> <p>A magnetic drain plug shall be installed in the Allison automatic transmission.</p>	
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FOUR-MODE-FIVE SPEED PROGRAMMING

The transmission shall be programmed for five speeds.

The transmission shall have the following gear ratios.

First - 3.49

Second - 1.86

Third - 1.41

Fourth - 1.00

Fifth - 0.75

Reverse - 5.03

The transmission shall shift from first through fourth gear without operator intervention. In order to achieve fifth range in the transmission the operator must depress the mode button on the shift selector. The chassis shall be geared for the top speed in 5th gear.

AUTOMATIC NEUTRAL

The transmission shall be provided with circuitry to provide automatic neutral. Setting the parking brake commands the transmission to neutral when the park brake is applied,

DRIVELINES

Universal joints and drive shafts shall be SPICER 1760 series or equal. Driveline installations shall be balanced to prevent vibration.

FUEL TANK

The fuel tank shall have a minimum usable draw capacity of 65.5 gallons and be D.O.T. certified. It shall be mounted with straps bolted to the bottom frame flange to allow for easy removal. The tank construction shall be of 12 gauge steel with single fuel pickup and return tubes. The baffled tank shall be vented to prevent low vacuum and facilitate rapid filling. The rear edge of the tank shall be tapered to allow for a greater angle of departure. The tank shall have a 2" NPT fill to the driver's side of the chassis. The fuel tank sending unit is to be mounted to the driver's side of the fuel tank for easy replacement without removing body panels.

FUEL LINES

Polyamide fiber, nylon braided, reinforced tubing with push-on reusable fittings shall be provided for the chassis fuel lines.

FUEL SHUT-OFF VALVE

A, ball type, fuel line shut off valve shall be installed in the suction side fuel line. The shut off valve shall be located near the inlet to the primary fuel filter.

FUEL/WATER SEPARATOR

The Cummins engine shall be equipped with an integrated fuel / water separator with a self venting bottom drain valve.

ALTERNATOR

A LEECE-NEVILLE model 4890JB, 320 amp alternator shall be installed on the engine.

FIRETRUCK CAB

The apparatus shall be designed to operate in emergency conditions. These conditions require the apparatus to maneuver into areas at a high rate of speed. To facilitate in these operations a cab-over-engine design is required in order to reduce the overall length of the apparatus thus increasing the maneuverability. The cab design must be such to provide safe and efficient transport of emergency personnel. The cabin shall be designed with four (4) side doors of the largest size possible and with a grab handle and step arrangement to provide ease of entry and egress.

There shall be up to six (6) positions available for occupant transport with a minimum of four (4) forward facing seating positions in the cab. The number of seats and seating locations are described in detail later in this document.

The apparatus cab shall be of the latest in automotive design, styling and appearance.

CAB MATERIALS AND CONSTRUCTION

The extruded aluminum cab shall have the following material gauges as a minimum:

3/16" aluminum sheet all locations, floor, side wall, front sheet, rear sheet, floor etc - No exceptions

Each bidder to describe the cab construction in detail

CAB DIMENSIONS

The cab shall have the following overall dimensional requirements:

- ☐ Overall Width - 100 inches
- ☐ Roof - 12" Raised
- ☐ Center of front axle to back of cab - 60 inches
- ☐ Center of front axle to front of cab - 74 inches
- ☐ Windshield area - 3,756 sq. in. minimum
- ☐ Front grille opening - 478 sq. in. minimum
- ☐ Combined side grille opening - 84 sq. in. each minimum
- ☐ Cab full tilt angle - 45 degrees minimum
- ☐ Cab full tilt height - 185 inches maximum

Cab interior dimensions shall be provided as a minimum in the following chart:

- ☐ Drivers side floor width 25-1/2 inches minimum
- ☐ Floor to the ceiling in the driver and officers area of the cab 59-1/2 inches minimum
- ☐ Floor to the top of the doghouse 28-1/2 inches maximum
- ☐ Officers side floor width 24-1/2 inches minimum
- ☐ The measurement across the floor from the rear wall to the first vertical portion of the engine enclosure 39 inches
- ☐ Floor to the ceiling in the rear of the cab 65-3/4 inches minimum

CAB DOORS

The cab entry and egress shall be designed for a firefighter in full turnout gear. Each door shall open a minimum of ninety degrees to afford the firefighter maximum space. The doors shall be of a flush design each having exposed, one-piece, polished stainless steel hinges. The hinge shall be made of 12-gauge material with a minimum hinge pin diameter of 1/4 inch. The door windows shall have interior and exterior glass weather seals to prevent the influx of exterior air. The doors

shall have exterior and interior paddle type latches for ease of opening with a gloved hand. The paddle latches are to have a rubber gasket, on the outside, separating the handle from the finished painted surface.

FRONT DOORS

The cab front doors shall be of the full-length design enclosing the entire step area of the cab. The door shall be a minimum of 38-1/2 inches wide and 74 inches tall. The front door windows shall have a minimum of 712 square inch area of viewing glass per door. There shall be a fixed piece of forward glass in each of the front doors.

REAR CAB DOORS

The rear cab doors shall be similar to the forward doors and shall be located directly behind the front wheel well area. These doors shall be 86 inches high x 34 inches wide. Each door shall have a roll down rear window with a minimum glass viewing area of 670 square inches.

INTERIOR DOOR LOCKS

All doors shall have door locks with interior controls and exterior keyed door locks. Each door shall be equipped with a locking mechanism with an operating means in the interior of the vehicle. The doors shall be equipped with appropriate safety interlocks to prevent accidental locking of the doors when closed.

DASH TRIM

The drivers cab dash console shall be made of black ABS with an appearance of the latest in automotive design, styling. Accompanying the dash console in the forward section of the cab shall be an officer's side flat dash for the mounting of a mobile data terminal.

CAB GLASS

AS-1 safety laminate glass shall be used in a two piece, wrap around design with a minimum 3760 square inches of windshield area for maximum visibility. The windshield shall have the style of a one-piece assembly with the practical installation of two pieces for lower replacement cost. The windshield shall be readily available from a nationally recognized automotive glass manufacturer that maintains local distribution outlets.

All glass shall be tinted. All fixed glass shall be installed with a one-piece triple locked rubber lacing material. Due to long term appearance two-piece chrome trim lock lacing is not desired.

SUNVISORS

The driver and officer side of the cab shall be equipped with a sun visors. The vinyl covered visors shall be a minimum of 17-1/2" by 9".

DRIVER SIDE ELECTRICAL CABINET

Beneath the driver's seat there shall be an electrical cabinet designed to house the main battery electrical disconnect and facilitate the installation of an onboard battery charger or battery conditioner. A bolt on limited access; aluminum diamond plate hatch shall be installed on the front side of the seat box. The access hatch shall have a louvered section to provide air circulation to the cabinet.

WINDSHIELD WIPERS

Two speed electric pantograph wipers shall be installed. These wipers shall have minimum 24" blades and have 28 1/2" wet arm electric pump washers. A 70 oz. Minimum windshield washer reservoir shall be furnished.

STEERING WHEEL AND COLUMN

The steering column shall be a tilt / telescopic type with an integral high beam / turn signal control switch. The column shall have self-canceling design for the turn signal switch. A 4-way warning "Hazard" light switch shall be mounted on the column. For safety, a rubber boot shall be installed to cover the steering shaft from the dash to the floor.

The steering wheel shall be a minimum of 18-inch diameter, covered with a padded absorbite finish. A lever on the left side of the steering column shall control the telescopic feature of the steering column.

FASTENERS

All cab exterior fasteners shall be stainless steel type fastened to the cab with nutserts.

BATTERY ACCESS

The rear cab steps shall have a removable kick panel, providing access to the batteries for routine maintenance and inspection.

CAB CORROSION TREATMENT

The cab shall have a corrosion preventative material conforming to Mil Spec C-16173-C, Grade 1, applied during and after construction. A 10-year warranty against perforation due to rust or corrosion shall be furnished for the cab.

TRANSMISSION SELECTOR

The transmission shall be controlled by a push button type shift control. It shall be internally illuminated for night operation.

TRANSMISSION OIL LEVEL SENSOR

The transmission shall be equipped with an oil level sensor. This sensor shall allow the operator to obtain an indication of the fluid level from the shift selector.

RAISED ROOF EXTERIOR DIAMOND PLATE OVERLAY

The raised roof section of the cab shall be covered with NFPA slip resistant aluminum tread plate to protect the cab roof from scratches.

EMI/RFI PROTECTION

The apparatus shall incorporate the latest designs in the electrical system with state of the art components to insure that radiated and conducted electromagnetic interference (EMI) and radio frequency interference (RFI) emissions are suppressed at the source.

The apparatus proposed shall have the ability to operate in the environment typically found in fire ground operations with no adverse effects from EMI/RFI.

BATTERY BOX TRAY - STAINLESS STEEL

The battery box trays shall be stainless steel to reduce the corrosive potential of the tray. The battery hold down and brackets and hardware shall also be made of stainless steel.

There shall be black Dri-Dek matting installed beneath the truck batteries.

BATTERY BANK

A single battery system shall be provided, utilizing four (4) high cycle type Group 31 batteries.

This system shall be capable of engine start after sustaining a continuous 150 amp load for 10 minutes with the engine off.

A battery disconnect switch Rated at not less than 450 amps continuous shall be used to activate the system and provide power to the power panel. A green pilot light shall illuminate to indicate that the battery bank is activated.

BATTERY CABLES

All battery wiring shall be "GXL" battery cable capable of handling 125% of the actual load. It shall be run through a heat resistant flexible nylon loom rated at a minimum of 300 degrees Fahrenheit. All cable connections shall be machine crimped and soldered.

STARTING CIRCUIT

One (1) engine start button is to be located on the lower right dash panel. It shall be wired to heavy duty solenoid rated at not less than 1100 amps. The battery indicator light is to be located directly above the start button to indicate that the battery bank is on.

BATTERY CHARGER

A Pro/ Mariner on board solutions model 1240, advanced electronic 4-step battery charger/power supply with a 40 amp output shall be installed, under the driver's seat.

REMOTE CHARGE INDICATOR PANEL

A KUSSMAUL 91-94-12 charge indicator shall be supplied. The remote charge indicator shall be located on the driver's seat box adjacent to the master battery switch.

SHORELINE AUTO-EJECT

A KUSSMAUL Super Auto Eject, model 091-55-20-120, with weatherproof cover shall be provided.

The Super Auto Eject is to be completely sealed to prevent internal contamination of the working components.

The Auto-Eject cover shall be a Kussmaul 091-55YW, yellow in color and mounted on the exterior of the cab behind the driver's door.

BATTERY JUMPER STUDS

Battery jumper studs shall be provided on the chassis. The jumper studs shall be mounted underneath the cab, on the rear of the driver's side battery box. The studs shall be connected to the chassis batteries with 1/0 color coded cables, red for the positive cable and black for the negative cable. The studs shall be protected with color coded plastic covers when not being used.

ENGINE DOGHOUSE

The engine doghouse inside the cab will be padded with a layer of sound and heat absorbing foam and covered with heavy duty vinyl trim upholstery to match or accent the interior of the cab.

The underside of the engine enclosure shall be covered with a sandwiched material for interior cab noise and heat rejection. The insulation for protection from heat and sound shall keep the dBa level within the limits stated in the current edition of NFPA 1901.

ACCESS FOR FLUID SERVICING

The engine enclosure shall have a hinged and latched panel to provide access to the engine lubricating oil dipstick, power steering fluid reservoir dipstick and engine coolant recovery reservoir. This access shall allow that these fluid levels can be checked and topped off, if required, without raising the cab.

CAB DOORS - INTERIOR TRIM

To provided durability the interior of the cab doors shall be finished with full length aluminum panel that is finished with Zolatone high abuse paint.

INTERIOR CEILING PADDING AND TRIM

The cab front interior ceiling shall have a one-piece, removable, vinyl headliner to cover all wiring and tubing used for lights and antenna leads.

INSIDE REAR WALL DIAMOND PLATE

Aluminum diamond plate shall be installed on the entire inside cab rear wall of a four side door tilt cab.

FLOOR COVERING

The front and rear floor areas of the cab shall be covered with "HUSHCLOTH" sound barrier floor mats. This floor mat shall be a three ply material with a 3/16" thick open cell isolation barrier of Polyurethane, a 3/32" thick closed cell Nitrile mid barrier for section reinforcement, and a 1/16" thick embedded pebbled grain wear surface.

REFLECTIVE MATERIAL - INTERIOR CAB DOOR

The cab and crew compartment doors shall have a minimum of 96 square inches of white reflective material affixed to the inside of each door. There shall be a 2" red chevron stripe applied over the white reflective material on each door.

LED WARNING LIGHTS - CAB DOOR FOSTER LIGHT

The interior of each door shall include one 16 inch long X 3/4 inch tall amber Weldon LED warning light. The light shall be mounted on the inside of the door above the door window to the extreme outboard edge of the door so it is visible from the rear of the vehicle. As a traffic warning indicator the light shall activate with a scrolling directional flash pattern which moves from the door hinge area outward when the door when it is in the open position.

INTERIOR CAB STEP TRIM

The cab steps shall be completely enclosed behind each door. The top surface of the steps shall be covered with non-skid aluminum tread plate trim.

GRAB HANDLES

Additional molded grab handles shall be installed inside the cab. The handle shall be located on the officer's side on the A post and one each side on the B Posts side of the crew area doors.

RADIO COMPARTMENT WITH DOOR

Beneath the officer's seat there shall be a radio compartment with interior dimensions of 19-1/2" wide x 17" long x 7" high. This compartment shall have a side mounted diamond plate door mounted on a piano hinge.

CAB STEP DIMENSIONS

The front cab steps shall have the following overall dimensional requirements:

- ☐ Driver's lower step size 10-1/4 inches deep minimum
- ☐ Driver's lower step size 29-1/2 inches front to back
- ☐ Officer's lower step size 10-1/4 inches deep minimum
- ☐ Officer's lower step size 29-1/2 inches front to back

INTERMEDIATE CAB STEP

The cab shall intermediate inside corner step. The intermediate step shall be approximately 9 inches from the top of the lower step to the top of the intermediate step.

INTERIOR CAB STEP TRIM

The cab steps shall be completely enclosed behind each door. No portion of the cab entrance step shall be exposed when the door is in the closed position. The lower step shall be sealed from the underside of the cab to eliminate road splash from entering the step area while the vehicle is driving. The horizontal step surfaces shall be covered with bright aluminum tread plate meeting the requirements of NFPA-1901. The vertical toe kick surface area of the cab step wells shall be covered with aluminum tread plate.

COMPARTMENT OPEN LIGHT

A Red Open Compartment Flashing Light, Whelen OS Series LED shall be mounted on the driver's side face of the overhead panel. A chrome flange is to be supplied with the light.

The light circuit shall be wired so that the light circuit is deactivated when the parking brakes of the apparatus are applied. A label shall be applied adjacent to the light 'DOOR OPEN'.

DOMES LIGHTS

Three (3) seven inch diameter clear dome lights shall be supplied. These lights shall be operated by opening any door, as well as, by individual switches mounted on the individual clear lens light. One light shall be installed in the front of the cab centered over the engine doghouse. Two lights shall be installed in the rear crew area of the cab.

ADDITIONAL LED WHITE/RED DOME LIGHTS

Four 6" diameter combo color LED interior dome lights shall be provided. The Lights shall have high output white LED's with a light output of 450 lumens ea. The light shall be rated for 50,000 hours and have a 10 year warranty from the manufacturer. Two lights shall be installed in the front of the cab, one each adjacent to the driver and officer. Two lights shall be installed in the rear crew

area. All white LED's shall be operated by opening any cab door. The same lights shall be provided with a red LED mode where the driver has switched control of the officer and crew area red lighting.

STEP WELL LIGHTING

Four step well lights shall be supplied. The lights shall be Whelen OS Series white LEDs with angled chrome plated covers, one in each step well. All step well lights shall be illuminated when any door is opened and the battery selector switch is on.

OFFICER MAPLIGHT

A Federal Signal LF12ER map light shall be mounted on the A pillar on the Officer's side of the cab.

HEATER / DEFROSTER

A 57,600 BTU heater with a three speed fan shall be mounted in the front of the cab, centered over the windshield. This heater shall have six (6) adjustable vents to assure windshield defogging.

DEFROSTER FANS

Two (2) 6" windshield defroster fans shall be mounted on the overhead console, one each side of the center of the cab.

45,000 BTU AIR CONDITIONING

A climate control system shall be furnished in the cab. The system shall consist of a 45,000 BTU air conditioning evaporator centrally located on the rear of the engine doghouse.

The compressor is to be plumbed to a heavy duty truck, dual fan air conditioning condenser mounted on the cab roof. The condensing unit shall have an aerodynamic shroud that is painted to match the color of the cab roof. There shall be an extended life filter receiver/dryer with a pressure relief valve installed to protect the system from contaminants, moisture, and high pressure. It is to have a sight glass for visual inspection and ease of service.

Dual high performance 3-speed blowers shall provide a minimum of 700 CFM air flow. Each blower is to be controlled separately. Four (4) forward facing and three (3) rear facing full adjustable diffusers with shutoff capability shall be utilized to direct the air flow through the cab. The air conditioning on/off switch, thermostat control, and blower switches shall be located on the evaporator unit.

36,000 BTU SUPPLEMENTAL HEATER

A 36,000 BTU auxiliary heater shall be furnished inside the conditioning evaporator unit to provide additional cab heating during cooler weather. The heater core is to be plumbed to the water lines of the engine cooling system.

CAB INSULATION

Foam rubber type insulation shall be installed in the rear wall and the cab ceiling to provide a better sound and heat barrier. The insulation shall be a minimum of 1" thick. The material shall be compliant with FMVSS-302.

DRIVER INSTRUMENTATION AND CONTROLS

The cab dash panel shall have black textured anti-glare surface. The gauges shall have red LED back lighting for enhanced visibility. The instrument panel shall include the following gauges and indicators.

- Electronic speedometer with LCD odometer
- Tri cluster gauge that includes:
 - Electronic tachometer
 - Engine coolant temperature gauge, with warning light and buzzer
 - Engine oil pressure gauge, with warning light and buzzer
- Transmission fluid temperature gauge, with warning light and buzzer
- Two air pressure gauges, with warning light and buzzer
- Voltmeter, with low voltage warning light and buzzer
- Fuel level gauge

- High beam indicator light
- Parking brake set light
- Turn signal indicator lights

The lighting control panel is to be located to the left side of the instrument panel. This panel shall have a black textured anti-glare surface. The lighting control panel shall include the following:

- Headlight control switch
- Dash rheostat for instrumentation lighting control
- Wiper and washer control switches

The engine control panel is to be located beneath the instrument panel on the driver's right hand side. The panel shall have a black textured anti-glare surface. The engine control panel shall include the following:

- Keyless ignition switch with a green pilot light

AUDIBLE TURN SIGNAL REMINDER

There shall be an audible alarm that shall sound when the turn signal remains flashing for a distance greater than one mile. The reminder shall not sound when the hazard lights are operating.

AUDIBLE LIGHTS ON REMINDER

There shall be an audible alarm that shall sound when the headlight switch is left in the on position and the ignition is off. The alarm shall self cancel after 2 minutes of operation.

AUDIBLE PARKING BRAKE REMINDER

There shall be an audible alarm that shall sound when the parking brakes are NOT set and the ignition is turned off. This alarm shall self cancel after 2 minutes.

The Parking Brake reminder shall sound an audible alarm when the parking brakes are set and an indicated speed of over two miles per hour occurs.

DUAL TRIP ODMETERS

There shall be two (2) trip odometers in the driver's information center. Each shall be capable of independent operation and reset. They shall be labeled Trip1 and Trip2 when the trip mileage is

shown in the LCD panel.

LOW FUEL LIGHT

A "Low Fuel" warning light and alarm shall be installed in the dash message center. This light shall illuminate when the apparatus fuel level reaches 25% of the fuel remaining.

TRANSMISSION OVERHEAT WARNING LIGHT

A transmission oil temperature light with alarm shall be provided on the dash message center.

LOW VOLTAGE WARNING

A low voltage indicator light shall be installed on the dash message center. An alarm and the dash indicator light shall activate when the system voltage drops below 11.8 volts.

AIR CLEANER RESTRICTION INDICATOR

An air cleaner restriction indicator shall be installed in the driver's message center. The indicator shall provide visual warning when a high air restriction condition exists.

LOW COOLANT WARNING

Low coolant warning shall be accomplished through the engine electronics to provide driver warning via the engine stop warning light.

INTERMITTENT WIPER CONTROL

A rotary combination intermittent electric wiper / washer switch shall be provided on the left hand side of the driver's dash.

OFFICER SPEEDOMETER

A speedometer shall be supplied on the right side of the cab to enable the Officer to monitor driving speed.

CONTROL CENTER

Mounted on the doghouse there shall be a black ABS driver / officer control center. This area shall include various controls and functions that must be available to the driver and officer. On the top of the control center there shall be an access panel for maintenance and troubleshooting of devices mounted on the control center. The switch panel shall be a Class 1 Smart Programmable Switch (SPS) panel the panel shall have ergonomic rubber molded rocker type switches with backlighting and shall include one (1) function as a master control switch to allow for pre-selection of response mode functions. The remaining switches shall be programmed and labeled as to the options selected for the vehicle.

PARKING BRAKE CONTROL VALVE

The parking brake control valve shall be located in the driver's dash engine control panel.

WHITE WARNING LIGHT CUT-OUT SWITCH

One switch position shall be provided to turn off all forward facing white warning lights for use in inclement weather.

CUP HOLDERS

There shall be two (2) recess mounted cup holders mounted on top of the doghouse console.

MULTIPLEXED ELECTRICAL SYSTEM

The apparatus shall be equipped with a Class 1 ES-Key Management System for complete control of the electrical system devices. This management system shall be capable of performing load management functions, system monitoring and reporting, and be fully programmable for control of the electrical system. NO Exceptions

The ES-Key system shall provide diagnostic capabilities for troubleshooting the electrical system of the apparatus.

CHASSIS COLOR CODED WIRING

All chassis wiring shall be type "GXL" in accordance with S.A.E. J1128 and NFPA-1901. ALL wiring shall be COLOR CODED and continuously marked with the circuit number and function.

All wiring to be covered in nylon heat resistant loom rated at a minimum of 300 degrees F

The chassis cab, engine and transmission, and body shall be electrically bonded to the chassis frame rails with braided ground straps.

ELECTRICAL SYSTEM CONNECTORS

All multiple conductor electrical connections shall be made with Packard electrical connectors. The Packard connectors shall become mechanically locked when mated. All single wire terminations requiring special connectors with a ring or spade terminal shall be crimped, and wrapped with heat shrink tubing.

INFORMATION DISPLAY MODULE

The Class -1 Information Display Module shall be located in the overhead panel for viewing by the driver is for displaying text, warnings and diagnostics. The information Display Module shall allow the Town to access and change load management shedding priority and provide maintenance text listing the routine maintenance items and lubrication capacities on the apparatus.

BACKUP CAMERA

There shall be an ASA Audiovox video system provided on the apparatus. The color monitor shall be an ASA AOM713WP. The monitor for the back-up camera shall be mounted on top of the engine doghouse within view of the driver to aide in backing up the apparatus. The back up camera system shall be powered with the ignition power in the cab. Operation of the camera will be by the driver with the monitor controls.

REAR CAMERA - COLOR - HIGH PERFORMANCE

There shall be supplied a color, heavy duty high resolution observation camera, ASA Model VCCS150. The camera shall have a non corrosive mounting bracket and stainless steel hardware. The back up camera shall be mounted at the upper rear of the apparatus beneath the walkway. A 12 gauge stainless steel trim guard shall be affixed to the wall behind the camera with a flange over the top of the camera housing to aid in protecting the camera. The flange over the camera shall be one inch wider than the camera width and extend one-half an inch behind the rear of the camera face.

12VDC TRIPLE POWER POINT

A triple outlet 12 volt, socket (cigarette lighter) type, receptacle shall be provided. The power point shall be wired to direct battery power with the appropriate wire size and fuse. The power point socket shall be centered on the front area of the engine doghouse for use by the driver and/or officer.

12VDC POWER CIRCUIT

Five circuits protected 30 amp battery "hot" circuits, five circuits protected 30 amp battery switched circuit, and five ground circuits with the proper wire size to handle the current shall be provided. These circuit groups are provided for two-way radio and/or accessory wiring. They shall terminate in the following areas:

Officer's seat box,

Center of the cab on top of the engine doghouse.

Rear of the engine doghouse on the left (driver's) side.

Rear of the engine doghouse on the right (Officer's) side.

center of the rear wall of the cab.

RADIO ANTENNA MOUNT WIRING

One (1) NMO mount shall be roof mounted, on the officer's side of the cab.

The antenna mount shall be located 34 inches from the front face of the cab and 18 inches from the cab side.

The un-terminated coax is to be routed in the cab to the radio power circuit termination or officer's seat box if no radio power circuit is requested.

The antenna wiring shall terminate behind the officer's seat or in the officer's seat box when so equipped.

RADIO ANTENNA MOUNT WIRING

Four NMO mounts shall be roof mounted,

Two on the driver's side of the cab one, 34 inches from the front face of the cab and 18 inches from the cab side and One 54 inches from the front face of the cab and 18 inches from the cab side.

Two on driver's side of the cab one 34 inches from the front face of the cab and 18 inches from the cab side and one 54 inches from the front face of the cab and 18 inches from the cab side.

The antenna wiring shall terminate behind the officer's seat or in the officer's seat box

MAP BOX

A map box shall be provided & shipped loose with the completed apparatus The map box shall be divided into 3 bins, with inside dimensions being 12-3/4" long x 4-1/2" wide x 8" deep. The map box shall be constructed of 1/8 aluminum and shall be painted to match the cab interior.

PUBLIC BROADCAST RADIO

The cab shall be equipped with an AM/FM CD Stereo Radio with four ceiling mount recessed speakers. The radio shall also include a seven channel weather band.

ROAD SAFETY KIT

One 2-1/2# ABC DOT Approved fire extinguisher and one set of DOT approved hazard triangles in plastic case shall be supplied with the apparatus. They shall ship loose with the apparatus.

CAB CRASHWORTHINESS TEST

Crew safety and Cab crash worthiness is extremely important to the Town. Certificates of testing & compliance shall be provided with each bidder's proposal.

No Exceptions

EXTERIOR GRAB HANDLES

The cab shall have a bright anodized extruded aluminum 24" grab handles at each door position. Molded rubber gaskets shall be installed under the grab handles to protect the painted surface of the cab.

FRONT GRILLE

A stainless steel square, three dimensional bright polished stainless steel front grille shall be installed on the front cab face. The front grille shall have a radiator rock guard to assist in preventing damage to the radiator core.

CAB MUDFLAPS

Mud flaps shall be installed behind the front tires. These mud flaps shall be a minimum of 22" wide to protect the underneath of the cab and body.

CAB GROUND LIGHTING

One light shall be mounted beneath each door. These lights shall be designed to provide illumination on areas under the driver and crew riding area exits. All cab ground lights shall switch able and shall automatically activate when any cab exit door is opened.

MIRRORS

MOTO-MIRROR 16 1/2" X 7" stainless steel heated, remote control mirror heads shall be mounted on spring loaded retractable mirror arms and shall Include a 5-1/2" x 8.5" convex mirror head.

CAB SIDE WINDOWS

Two AS-2 tempered glass, fixed side windows, 26-1/2" high x 16" wide shall be furnished, one on each side behind the forward doors. All glass shall be tinted.

REAR WINDOW SAFETY BARS

There shall be a one inch stainless steel grab bar installed on each rear door. This bar is to be installed on the rear door frame even with the window in the down position to prevent firefighters from using the glass in the door for a handle.

UNDER CAB ENGINE MAINTENANCE LIGHTS

Two (2) engine maintenance lights shall be supplied beneath the cab. These lights shall illuminate automatically when the cab is tilted to the full tilt position.

ROOF MOUNTED SPOTLIGHT

One (1) GOLIGHT Inc., model 2020 , remote controlled, spotlight shall be hard wired into cab electrical system. The spotlight shall incorporate the Cr5 PentaBeam bulb and shall be capable of 370 degrees of horizontal rotation and 120 degrees of vertical elevation/depression. The remote on/off toggle control panel shall be mounted in the overhead panel one each side. The GOLIGHT spotlight shall be mounted on the cab roof, behind the light bar centered from left to right.

WHEEL WELL LINERS

To reduce road splash and allow for easy cleaning, Stainless steel bolt in front wheel well liners are to be installed. The wheel well liners are to be a minimum of 22 inches in width.

STAINLESS CAB FENDERETTES

To reduce road splash on the cab sides, polished stainless steel fenderettes shall be installed around each the wheel opening the fenderettes shall be stepped slightly off the painted surface to allow for cleaning between the fenderette and the cab sidewall.

EXTERIOR REAR WALL DIAMOND PLATE OVERLAY

The cab exterior rear wall shall be covered with a single sheet of bright aluminum tread plate to protect the back of the cab from scratches.

CAB TILT SYSTEM

The cab shall tilt a minimum of 45 degrees for ease of serving. Tilting shall be accomplished by means of an electric over Hydraulic tilt pump. The cab tilt mechanism shall be equipped with a positive locking mechanism to hold the cab in the full tilt position. Release of the service lock shall be by means of a pull type assembly that does not require personnel to be under the cab. The cylinders shall have a velocity fuse at the base to prevent the cab from falling in the event of a hydraulic hose failure. The cab shall be capable of tilting 90 degrees for major engine service, if necessary. The cab shall have a three (3) point cab locking system. To prevent undue stresses in the cab, the cab mounting shall incorporate a five (5) point load mounting system.

The rear cab lock shall be center point mounted to prevent normal twist of the chassis from affecting the cab mounting, cab structure and windshield areas of the cab. This rear cab lock shall be mounted on a chassis cross member to provide a stable platform for the locking system. The cab lock shall be mounted to a base plate that is fastened to rubber isolators to reduce road noise and provide additional movement of the cab lock. This locking system shall automatically open prior to the cab tilting and automatically relatch when the cab is lowered completely into the travel position.

With this system, extreme chassis twist shall allow the cab to move independently of the rear cab supports, reducing the structural stress damage often caused by outboard dual cab locking systems.

A remote control for cab tilting operation shall be provided. The control shall be "safety-yellow" in color.

The cab lift system shall have a cab tilt interlock. The cab tilt shall not be able to be activated unless the master battery switch is in the on position with the parking brake set.

CHASSIS PAINT

The frame and running gear shall be painted gloss black enamel. The running gear shall consist of the axles, drivelines, air tanks, steering gear, frame mounted brackets, draglink(s), and fuel tank.

The air system piping and electrical harnesses shall not be installed in the frame at the time of the frame painting. This shall insure complete coverage of paint behind those areas, as well as to insure that the air piping and wiring harnesses do not have paint applied to them, hindering troubleshooting.

INTERIOR FINISH

The entire interior of the cab shall be painted with spatter paint, solid black in color. Black spatter paint is selected for ease of repairs when the interior is scratched. Each bidder shall describe in detail the process used to paint the interior

The following interior components shall also be finished in black:

- Overhead console
- Sun visors
- Interior
- Headliner
- Rear wall covering
- Interior flooring
- Interior door panel
- The doghouse covering material
- The dash housing,
- Doghouse console;

CAB EXTERIOR FINISH

The exterior doors and all fixed cab glass are to be removed from the cab prior to the paint and body process beginning.

The two tone, final finish of the cab shall be to fire apparatus standards; exhibiting excellent gloss durability and color retention properties.

Each Bidder is to describe their exterior paint process in detail.

FINISH AND COLOR COATS

The final finish shall be free of dirt and sags the final sanding and buffing of the clear coat shall result in a flat / glass like finish. The clear coat shall also provide a UV barrier to prevent fading and chalking.

DuPont Imron will be used for the exterior paint No-Exceptions

CAB PAINT WARRANTY

The manufacturer shall provide warranty to the Town of the custom built apparatus for a period of Seven years. The warranty period shall commence on the date the vehicle is delivered

TOUCH UP PAINT

There shall be one pint of 'touch-up' paint provided for both the red & white paint

PAINT BREAK STRIPE

A 1/4" wide Black stripe shall be added to the cab, two tone paint scheme. This stripe shall be applied at the paint break line.

SEATS

All seats regular crew listed below shall be H.O. Bostrom brand seats, Red three point shoulder harness seat belts shall be provided for each seat.

DRIVER'S SEATING POSITION

The seat shall be high back air ride suspension, high back seat with fore and aft slide adjustment.

OFFICER'S SEATING POSITION

The seat shall be SCBA type seat with a fixed bottom cushion and a pivoting head rest. The seat shall contain a SCBA filler pad for when the bottle is not in use. There shall be a Secure-All self-contained breathing apparatus bracket mounted into the seat cavity.

CREW AREA - FORWARD FACING LEFT OUTBOARD SEAT POSITION

The seat shall be a non-SCBA, non Bostrom flip-down seat cushion, no back cushion, mounted on the rear wall of the crew cab. The bottom cushion shall covered in a vinyl material.

CREW AREA - FORWARD FACING LEFT INBOARD SEAT POSITION

Tanker Series Self-Contained Breathing Apparatus (SCBA) type seat with a flip bottom cushion and a pivoting head rest. There shall be a Secure-All self-contained breathing apparatus bracket mounted into the seat cavity.

CREW AREA - FORWARD FACING RIGHT INBOARD SEAT POSITION

Tanker Series Self-Contained Breathing Apparatus (SCBA) type seat with a flip bottom cushion and a pivoting head rest. There shall be a Secure-All self-contained breathing apparatus bracket mounted into the seat cavity.

CREW AREA - FORWARD FACING RIGHT OUTBOARD SEAT POSITION

The seat shall be a non-SCBA non Bostrom flip-down seat cushion, no back cushion, mounted on the rear wall of the crew cab. The bottom cushion shall be covered in a vinyl material.

FORWARD FACING SEAT RISER AND STORAGE TRAY

The center forward facing seats shall be installed on a powder coated aluminum riser. Under the seat riser there shall be an aluminum roll-out tray designed to provide safe storage for tools and equipment in the crew area. This tray, lined with Dri-Deck, shall have a diamondplate front with a D-ring handle to provide positive lock in the closed position.

All seats shall be black in color.

SEAT MATERIAL

The Drivers & SCBA seats shall be covered in Durawear ballistic material

SEAT BELT WARNING LABELS

The cab shall be equipped with two (2) seat belt warning labels. These labels are to be in full view of all the occupants.

VEHICLE DATA RECORDER

Apparatus shall be equipped with a Class I "Vehicle Data Recorder and Seat Belt Warning System" (VDR/SBW). The VDR/SBW will function per NFPA requirements. The VDR data shall be downloadable by USB cable to a computer using either Microsoft™ or Apple™ Operating Systems using Class I/ O.E.M. supplied reporting software.

SEAT BELT WARNING SYSTEM

There shall be a seat belt indicator system supplied in the cab. The indicator system shall indicate seat belt use for each individual seating position when the seat is occupied, the seat belt remains unfastened and the parking brake is released. A display panel shall be supplied in the driver's overhead dash area. The panel shall have an audible indicator and a red light display to indicate that a seat belt has not been fastened.

FRONT BUMPER

A 12" high heavy-duty 10 gauge, polished stainless steel, wrap around, 2-rib front bumper shall be provided the full width of the cab. The front bumper face shall extend 6 inches ahead of the front face of the cab skin.

TOW HOOKS

Two chromed tow hooks shall be provided and shall be attached directly to the front frame under the bumper. These tow hooks shall be attached with two Grade 8 bolts with hardened washers and Grade "C" distorted thread locknuts.

FRONT BUMPER UNDERBODY LIGHTING

There shall be two (2) model #40 ground lights provided at the outer front corners of the front bumper, one (1) each side, to illuminate the area under the front bumper of the truck. All underbody ground lights shall be switched on when the parking brake is set and the ignition & the master battery switch in the "ON" position.

AIR HORNS

Dual stutter tone air horns shall be recessed into the front bumper, one each side.

AIR HORN IGNITION CONTROL

To eliminate inadvertent operation the air horns shall be operable only when the battery selector and ignition switch are in the "ON" position.

AIR HORN CONTROL SWITCHES

The chassis air horns shall be controlled by a lanyard with a 'Y-chain'. The lanyard chain shall be mounted to the center of the overhead console within reach of both the driver and officer and shall terminate at the cab center.

The air horn and the electric horn shall be sounded simultaneously by depressing the horn button in the steering wheel.

ELECTRONIC SIREN

A Federal Signal 100 watt electronic siren control with microphone, model #PA300, shall be provided. The siren control shall be mounted on top of the engine doghouse within reach of the

driver and officer.

Q2B MECHANICAL SIREN

A FEDERAL Q2B siren shall be mounted recessed in the cab front grille.

To eliminate inadvertent operation the mechanical siren shall be operable only when the Master Warning Light switch is in the "ON" position. A momentary rocker switch shall be provided in the driver's switch panel for operation of the siren brake. This switch shall be backlit with the legend "SIREN BRAKE". A second momentary switch shall be provided in easy reach of the officer for operation of the siren brake. This switch shall be labeled "SIREN BRAKE".

One (1) foot switch for the siren shall be provided on the left side of the driver's side cab floor and the one (1) button switch on the officer's side dog house. The officer's button switch shall have a red rubber boot and be clearly labeled 'Siren'.

ELECTRONIC SIREN SPEAKER

There shall be one polished aluminum 100 watt speaker provided. The speaker shall be recessed into the right (officer's) side of the front bumper immediately outboard of the chassis frame rails.

ELECTRONIC CHASSIS OPERATOR'S MANUAL

An electronic Operator's Manual w/Parts List - One Set shall be provided with the chassis.

An electronic Electrical System Manual shall be provided.

This manual shall provide complete wiring schematics for the vehicle.

The manual shall be provided with diagrams of the vehicle showing the wiring harness routing within the vehicle. Each of these diagrams shall include the connectors between the harnesses that provide a hyperlink to a drawing of the actual connector where pin functions can be examined.

Schematics for each system of the vehicle shall be provided with hyperlinks to the connectors for pin designations and to the vehicle drawings for harness location within the vehicle.

An electronic Air System Manual shall be provided.

This manual shall provide complete air system schematics for the vehicle.

The manual shall be provided with diagrams of the vehicle showing the air tubing routing within the vehicle.

Schematics for each system of the vehicle shall be provided with hyperlinks to the air tanks and valves and to the vehicle drawings for exact location within the vehicle.

MAJOR COMPONENT WARRANTIES

The vehicle shall be covered by Arvin/Meritor warranty that is in effect at the time of the vehicle production.

The transmission shall have a five year unlimited mileage as defined in the Allison New Product Warranty.

The Cummins engine shall have the standard five year warranty from the engine manufacturer that is in effect at the time of the vehicle is placed into service.

The cab structure shall be warranted for a period of ten years

<p>The apparatus manufacturer shall provide a base (parts and labor warranty) to the original Town of the custom built apparatus for a period of twelve (12) months,</p> <p>The warranties shall commence on the date the vehicle is delivered to the Town. Detailed warranty documents which shall be provided upon request. In any case warranty issues shall be handled by a single phone call to the apparatus dealer/service center <u>No exceptions</u></p> <p><u>PURCHASE INTENT</u></p> <p>The apparatus being purchased is expected to have an 18 to 20 year service life. Based on this requirement, the department is extremely concerned that the apparatus body remains structurally sound and the outward appearance remains in a “like new” condition, with minimal maintenance and upkeep, throughout the intended service life. Aluminum apparatus bodies and differing construction designs will be reviewed and considered only if the builder / manufacture will meet the same “Body Structural Warranty” requirements specified in this bid document and in the respondent specifications provide adequate proof that procedures and materials are employed in the alternate material and designs to prevent corrosion over the intended service life. Regardless of materials used or design, the entire body design shall be of a bolted design to allow for ease of removal for repair or replacement, without cutting welds.</p> <p><u>APPARATUS BODY DESIGN AND CONSTRUCTION</u></p> <p>The apparatus body shall be built of stainless steel and shall be designed exclusively for Fire Service use. The overall body width shall be 100 inches wide and shall be constructed in accordance with current NFPA requirements. All metal work shall be free of sharp edges, objects or corners. No exceptions are allowed to this requirement.</p> <p>The body design shall be fully tested with proven engineering and test techniques such as finite element analysis, stress coating, and strain gauging. Engineering and test techniques shall have been performed with special attention given to fatigue life and structural integrity of compartments and body support system.</p> <p>The entire apparatus body shall be a precision laser machined, bolted construction, properly reinforced with integral flanges eliminating the need for additional structural shapes.</p> <p><u>MODULAR BODY REQUIREMENTS</u></p> <p>The body shall be completely modular in design allowing transfer of body components to a new chassis in the event of an accident or wear. Body components shall be removable from chassis without cutting or bending. The modular design shall also facilitate ease of repair or replacement of major or minor body parts should damage is incurred.</p> <p>All body panels are to be laser machined to ensure consistency and accuracy (+/- .010"). This shall greatly enhance assembly and matching of repair parts. The body compartment floors, rear walls and roof areas shall be constructed of 12-gauge 304 austenitic stainless steel. The vertical front and rear walls are designed with 14-gauge stainless steel. These front and rear walls are designed as a structural beam with the inclusion of the design that allows for future installation of telescoping lights.</p> <p>Interior and unexposed stainless steel panels shall be #4B finish to eliminate the need for high maintenance painted surfaces in the compartments. All exterior stainless steel panels shall have #4B finish.</p> <p>The entire body shall be fabricated using precision holding fixtures to ensure accurate dimensions. The body assembly shall be securely bolted to the sub-frame utilizing steel, certified Grade 8 bolts.</p>		
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The rear vertical corners of the apparatus body shall be recessed to provide a mounting area for telescoping light poles.

COMPARTMENT ROOF CONSTRUCTION

Each compartment top shall have a bolt in 12-gauge stainless roof section for supporting roof loads of up to 500 pounds per square foot without permanent roof deformation.

REAR FRAME EXTENSION

The rear chassis frame extension system shall consist of a interwoven dual .625" thick steel drop frame extensions with a transverse 4" x 3" x .375" thick structural channel, and dual laminated .188" thick rear compartment and tailboard support tapered angles on each side of apparatus. The extension shall be bolted to the chassis frame utilizing Grade 8 bolts and Grade C locknuts with hardened washers. For ease in replacement of damaged components in an accident there shall be no welding of components to the chassis frame. Two (2) tow eyes with an eye diameter of not less than 3.5" shall be attached directly to the chassis frame extensions. The tow eyes shall be fabricated of .625" thick steel.

BODY MOUNTING SYSTEM

The right and left side compartments shall be attached to a stainless steel body support. The stainless steel support shall be attached to the chassis frame extensions by means of an elastomer spring mounting system to form a modular integral body support system. The design shall allow for maximum chassis flexing without undue stress transfer to the apparatus body.

The apparatus body shall not rest upon the chassis truck rails and must be separated entirely from the steel frame of the chassis to prevent galvanic action. Loose fitting u-bolt body mounting systems are not acceptable due to the likeliness of the apparatus body shifting or becoming detached from the chassis upon rear end impact.

COMPARTMENT INTERIOR FINISH

For better interior visibility, to reflect light better, ease of maintenance and prevent the masking of poor welds and questionable workmanship the interior of the body compartments shall remain uncoated.

EXTERIOR ROOF FINISH

The top of the compartments shall be brushed stainless steel.

REAR TAILBOARD

A rear tailboard 10" deep shall be provided at the rear from "Laser Grip" stainless steel meeting NFPA 1901 step requirements. The tailboard shall provide protection for the side body compartments and shall provided recessed mounting for the rear ICC marker lights. It shall be bolted to the rear support structure.

COMPARTMENT DESIGN AND CONSTRUCTION

All compartments shall be manufactured from 12-gauge stainless steel with the vertical front and rear corner walls from 14-gauge, they shall be of sweep out design and shall be bolted together. Stainless recessed round head bolts and stainless aircraft style "ESNA" nuts shall be applied for each fastener.

Wherever possible, body bolts shall be hidden from plain view for appearance and ease of apparatus cleaning.

COMPARTMENT VENTILATION

Each compartment shall be provided with a laser cut stainless steel louver to provide adequate ventilation.

There shall be filters provided for compartments L1, L3, R1, R3 and RR1. The protective louver covering the filter shall be removable to allow for filter changing. The filter shall be 100% virgin nylon fiber in an open web design that is USDA approved. The filter shall be chemically treated with Dimethyl Benzyl Ammonium Saccharinate to aid in the reduction of bacteria and fungi.

LEFT SIDE COMPARTMENT DIMENSIONS

FORWARD OF WHEEL WELL - L1 & L2

There shall be two rescue style, full height compartment ahead of the rear wheels. The first compartment shall have approximate dimensions of 56" wide x 77" high x transverse and the second compartment shall have approximate dimensions of 52" wide x 77" high x transverse..

ABOVE WHEEL WELL - L3

There shall be one high side compartment centered over the rear wheels. It shall have approximate dimensions of 52" wide x 47" high x transverse.

REAR OF WHEEL WELL - L4

There shall be one rescue style, full height compartment behind the rear wheels. It shall have approximate dimensions of 51" wide x 77" high x 24" deep.

TRANSVERSE AREA

At the left rear of the L4 compartment there is a transverse area through to the forward section of the R4 compartment with dimensions of 23" wide x 48" deep x 59" tall. This area is forward of the RR1 compartment.

ROLLUP DOOR CONSTRUCTION -

All body compartments shall be provided with satin finish Gortite roll up doors. The door latches shall be non-locking stainless steel lift bars and shall be provided with a magnetic door ajar switch system.

The compartment roll-up doors shall have cloth straps, one (1) per door, to assist in the closing of the roll-up doors.

FENDER SIDE SKIRTS

There shall be stainless steel fender side skirts located in the area of the rear wheels. The design of the fender sides shall be a minimal length to provide maximum compartment space in the apparatus.

FUEL FILL - SIDE BODY

The fuel fill shall be located in the rear fender area on the left side of the apparatus body. The spring loaded fuel fill door shall have "Diesel Fuel" laser cut in the face of the door. There shall be a vent line from the fuel tank to beneath the fuel cap to aid in fueling of the truck.

BODY FENDERS - POLISHED

The apparatus body fenders shall be made from 16 gauge polished stainless steel and shall be rolled, die stamped and fully removable. The stainless steel fenders and stainless fender liners shall be fastened with stainless bolts and ESNA nuts to the outer fender panel.

REAR AXLE MUD FLAPS

Two (2) black, anti-sail, mud flaps shall be mounted behind the rear wheels.

SCBA BOTTLE COMPARTMENTS

Four (4) SCBA bottle tube compartments shall be provided, two (2) in each side rear wheel well area. Each compartment shall be constructed of gray molded storage compartment to provide SCBA scuff protection. A door seal shall be provided at the perimeter of the SCBA compartment. The doors shall be brushed stainless steel with a push button trigger latch.

SCBA BOTTLE RETENTION STRAP

One (1) one-inch (1") wide loop of red webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in the event the door is not latched for travel. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.

RIGHT SIDE COMPARTMENT DIMENSIONS

FORWARD OF WHEEL WELL - R1 & R2

There shall be two rescue style, full height compartment ahead of the rear wheels. The first compartment shall have approximate dimensions of 56" wide x 77" high x transverse and the second compartment shall have approximate dimensions of 52" wide x 77" high x transverse..

ABOVE WHEEL WELL - R3

There shall be one high side compartment centered over the rear wheels. It shall have approximate dimensions of 52" wide x 47" high x transverse.

REAR OF WHEEL WELL - R4

There shall be one rescue style, full height compartment behind the rear wheels. It shall have approximate dimensions of 51" wide x 77" high x 24" deep.

TRANSVERSE AREA

At the left rear of the R4 compartment there is a transverse area through to the forward section of the L4 compartment with dimensions of 23" wide x 48" deep x 59" tall. This area is forward of the RR1 compartment.

REAR COMPARTMENT DIMENSIONS

There shall be one (1) full height compartment at the rear of the body. It shall have approximate dimensions of 48" wide x 77" high x 32" deep.

REAR BODY REFLECTIVE CHEVRON STRIPING

The rear-facing vertical surfaces of the rear taillight panels and the rear body area beside the full height rear door(s), visible from the rear of the apparatus, including the rear compartment door(s), shall be equipped with six (6) inch wide retro-reflective striping in a chevron pattern sloping downward and away from the centerline of the vehicle at an angle of 45 degrees.

Each stripe in the chevron shall be a single color alternating between red (3M #-82) and yellow (3M #-81).

BODY RUBRAIL - POLISHED STAINLESS STEEL

The apparatus body shall have a bolt on extruded, polished stainless steel rub rail affixed to the side beneath each door area. The rub rail shall provide additional strength and protection and shall be constructed of 3/8" x 1-1/2" stainless steel fastened with stainless steel fasteners. Each rub rail shall be attached to the apparatus body with stand off

STAINLESS STEEL APPARATUS BODY PAINTED

The following apparatus body components shall be painted Red to match the cab lower color.

The rear wheel fender panels

The exterior surface of the coffin compartments

The area between the doors on the side compartments

EXTERIOR COMPARTMENT LIGHTING

A minimum of four incandescent compartment lights shall be provided for each body compartment. No exceptions to this requirement.

Two (2) LED strip lights shall also be provided for each body compartment in addition to the incandescent compartment lights.

Each body door shall have an automatic compartment light switch.

UNDERBODY LIGHTING

Underbody ground lights shall be provided under the apparatus body as required by current NFPA 1901. Four Truck-Lite model #60 ground lights shall be provided at the rear of the apparatus body, two each side, to illuminate under the rear compartments.

There shall also be four model #40 ground lights provided two (2) at the outer front corners of the apparatus body, one (1) each side, to illuminate the area under the forward compartments and two (2) below the middle full height compartments, one each side. All underbody ground lights shall be switched on when the parking brake is set ignition and master battery switch in the "ON" position.

CAB SIDE SCENE LIGHTS

There shall be one side scene lights installed on the left & right sides of the cab between the front and rear cab doors on the raised roof section. The lights shall be Whelen M6ZC white LED Scene lights mounted on Whelen M6P15C 15° angled bright finished housings. The scene lights shall be operated by a switch located in the driver's area of the cab. The scene light shall also be automatically operated by either the front or the rear door on the same side of the cab opening.

BODY SIDE SCENE LIGHTS

There shall be two each side body side scene lights installed as high as possible and spread out as far as possible on both sides of the apparatus body. The lights shall be Whelen M6ZC white LED Scene lights. The scene lights shall be operated by a switch located in the driver's area of the cab.

BODY REAR SCENE LIGHTS

There shall be two rear scene lights installed as high and as wide as possible on both sides of the rear of the apparatus body. The lights shall be Whelen M6ZC white LED Scene lights mounted on Whelen M6P15C 15° angled bright finished housings.

The rear scene lights shall be operated by

A switch located beneath the left rear step or a switch in the driver's switch panel. If the scene light is left in the 'ON' position the lights shall automatically turn off when the truck is parking brake is released.

Additionally, the rear scene lights shall come on to supplement the back-up lights whenever the transmission is placed into reverse.

FORWARD FACING BROW LIGHT

One brow light shall be provided and mounted centered on the leading edge of the cab roof facing forward. The light shall be a Fire Research Optimum OPA800. The lamp head shall have one quartz halogen 1000 watt 120 volt bulb. The brow light shall have a white housing

A switch shall be located in the cab switch panel for the brow light

FULL LENGTH 'COFFIN' COMPARTMENT, LEFT & RIGHT SIDE

Two (one each side) full length compartments shall be provided on top of side compartments with top access. The compartment vertical walls shall be constructed of stainless steel and shall be approximately body length x 20-1/2" deep x 24" wide. There shall be a fixed box at the front and the rear of the compartment to provide light mounting on the sides. A decorative aluminum diamond plate trim piece shall be added to the area above the body side compartments and the coffin compartment sides where they meet the compartment roof.

ALUMINUM TREADPLATE WALKWAY

An aluminum tread plate walkway shall be provided for the full length compartments. The walkway step surface shall be covered in aluminum diamond plate meeting the current revision of NFPA 1901 for step requirements.

WALKWAY LIGHTS

Four (4) round incandescent lights shall be provided along the walkway side of each coffin compartment. The lights shall be spaced equally along the length of the compartment and shall illuminate when the parking brake is set.

GRAB HANDLES

A pair of grab handles shall be provided and installed on the left coffin compartment. One (1) at the front and one at the rear of the compartment to aid in accessing the compartment.

QUARTZ LIGHTS

Four FRC "Optimum" model OPA250-S75, 120-volt / 750-watt recessed quartz lights shall be

provided. The lights shall be recess mounted one (1) each on the front and rear box ends of both side coffin compartments.

QUARTZ LIGHT SWITCHING

The Quartz Lights shall be switched with a pair of breakers in the load center. One breaker shall be for the left side and one breaker for the right side of the apparatus. 12-volt, switches shall be wired through 120-volt relay(s) and shall be located in the cab switch panel for the apparatus body quartz lights.

HEADER PANEL

A stainless steel panel shall be provided on the roof at the front of the apparatus body. This panel shall be the height of the coffin compartments and shall run from the left coffin compartment to the right coffin compartment along the front edge of the apparatus body roof.

The top of the coffin compartments are to be provided with two lift up doors on each compartment. The lift up doors shall be a 'double wall' design overlapping the top of the compartment to reduce the possibility of rain entering the compartment.

The doors are to be constructed of aluminum with smooth finished inside panels and NFPA compliant tread plate on the exterior. The doors are to be attached to the compartment top with a continuous stainless steel hinge along the outer edge.

The doors shall have a top mounted handle and include gas shock doors stays to keep the doors in the open or closed position without latches.

A 4" LED light shall be provided in the inner panel of each door with a switch wired to the open compartment light in the cab.

OIL DRY HOPPER

A hopper shall be provided in the front of the right coffin compartment for the storage and dispensing of oil dry. The hopper shall have a hinged lid with a latch and shall be equipped with a 3" outlet at the bottom of the hopper extending through the floor of the coffin compartment. The outlet shall pass through the R1 compartment ceiling with a 3" 1/4 turn valve mounted near the floor of R1 with a discharge tube extending to beneath the floor of R1 for ease of dispensing the absorbent material.

The container shall be large enough to hold approximately 100 pounds of oil dry absorbent material.

BODY ROOF ACCESS LADDER

A ladder shall be provided on the rear of the apparatus body to provide access to the body roof. The ladder shall be mounted on the left side of the rear of the body and shall include a swing down section for easier access from the ground.

RECEIVER HITCHES

There shall be Four Class III receiver hitch assemblies (one each location) attached to apparatus in the following locations:

The rear of the apparatus below the rear step. The receiver shall be connected to the chassis and body sub-frame assembly.

Left (driver's) side of the apparatus beneath compartment L1.

Right (officer's) side of the apparatus beneath compartment R1.

front of the apparatus, centered beneath the front bumper.

REAR TRAILER RECEPTACLE

One (1) 7 pole trailer light receptacle with a weatherproof cover and mating plug with a 6 inch pigtail shall be provided on the rear of the apparatus.

12V RECEPTACLES

Four 12-volt DC receptacle with a weather proof cover shall be provided adjacent to each receiver for power to the portable winch

QUICK MOUNT RESCUE WINCH

A Ramsey 9,000 lb. Winch assembly, Model QM 9000 12V, shall be provided.

This winch is to have the following features:

Mounts directly to a class III hitch.

Gear reduction ratio 138:1.

One (1) cam action clutch to enable free spooling.

One (1) 12' heavy duty remote control switch.

One (1) length of 105' of 5/16" diameter wire rope with replaceable clevis hook.

DEEP ALUMINUM SHELVES - ADJUSTABLE

One adjustable aluminum shelf shall be installed and shall have a flange 1-1/2" deep and a minimum material thickness of .190" Each shelf shall be adjustable in height and held in place by four extruded uprights.

Each adjustable shelf shall be installed as follows:

1ea RR1

The surface of the aluminum shelf shall be covered with Dri-Dek mat for improved ventilation that shall also provide a non-slip surface. The Dri-Dek mat shall be black in color.

ALUMINUM TRAYS - PULL OUT

Four heavy duty pullout 250lb trays shall be installed and shall be equipped with roller bearing slides and a gas shock to hold the tray in both the in and out positions and shall be made from .190" aluminum. Each heavy duty pullout tray shall be installed as follows:

L1 lower portion of compartment

L2 lower portion of compartment

R1 lower portion of compartment

R2 lower portion of compartment

ALUMINUM TRAYS - PULL OUT HD

Two heavy duty pullout 500lb tray shall be installed on the floor of the compartment and shall be equipped with hd roller bearing slides and a gas shock to hold the tray in both the in and out positions and shall be made from .190" aluminum. The heavy duty pullout trays shall be installed in the following compartments.

RR1

R4

ALUMINUM TRAY - PULL OUT-TRANSVERS

Two (2) heavy duty dual pullout full transverse tray shall be installed, it shall be equipped with Slide Master rollers and a latch to hold the tray in the in and out position and shall be made from .190" aluminum with a maximum capacity of 2000 pounds.

The heavy duty pullout trays shall be installed in following compartments.

L2-R2

L3-R3

DRI-DEK MATTING - TRAYS

The surface of the eight above aluminum trays shall be covered with Dri-Dek mat for improved ventilation that shall also provide a non-slip surface. The Dri-Dek mat shall be black in color.

ALUMINUM TRAYS - PULL OUT-ADJUSTABLE

One heavy duty vertically adjustable pullout tray shall be installed and shall be equipped with roller bearing slides and a gas shock to hold the tray in both the in and out positions and shall be made from .190" aluminum.

The heavy duty pullout tray shall be installed as follows:

1ea RR1

ALUMINUM TRAYS - PULL OUT AND DOWN

Six 47" pullout and down trays shall be installed and shall be constructed of formed .190" aluminum with a maximum capacity of 250 pounds.

Each pullout and down tray shall be installed as follows:

1ea L2, R2, L3,R3,RR1

2ea R4

DRI-DEK MATTING - SHELVES/TRAYS

The surface of the six aluminum trays shall be covered with Dri-Dek mat for improved ventilation that shall also provide a non-slip surface. The Dri-Dek mat shall be black in color.

VERTICAL DIVIDERS

One vertical divider shall be provided in the L1-R1 exterior compartments. The placement of this divider shall be as needed to shield the Cafs Unit from equipment in the transverse compartment.

PULL OUT VERTICAL TOOL BOARD

Three full height vertical dual side pull out tool board shall be installed in the L1-R1 exterior body compartments.

Each board shall be equipped with Heavy duty roller slides and a latch to hold the board in place when stored and deployed. The tool board shall be made from .190" aluminum. Both sides of the three tool boards shall be covered with FoxTrax or equivalent aluminum extrusion tool mounting.

POLY BIN

Three white .5 thick poly bins with lifting slots shall be provided. The bin(s) shall measure 9.5" wide x 20.0" long x 9.0" high.

POLY BIN

Three white .5 thick poly bins with lifting slots shall be provided. The bin(s) shall measure 21.5" wide x 20.0" long x 13.0" high.

APPARATUS BODY ELECTRICAL SYSTEM

All body electrical shall conform to NFPA 1901 latest edition standards. The apparatus shall be equipped with a heavy-duty 12-volt negative ground system.

The apparatus shall be equipped with a Class1 Es-Key Management System for complete control of the electrical system devices.

The left rear compartment shall house the relay based Power Distribution Module (PDM). The PDM shall be mounted on a removable panel in the left rear compartment with sufficient harness length to allow a technician the ability to remove the PDM and place it on a compartment shelf for diagnostics and service. All wiring shall be color-coded and function coded. All circuits shall be divided and balanced for proper load distribution. Where possible, wiring shall be routed in looms as a single harness. Heat resistant convoluted loom shall be used. Only solderless, insulated crimp automotive electrical connectors shall be used.

GENERATOR

An Onan model 35.0YD-CR/621, 35 KW PTO generator system shall be supplied and installed on the apparatus. The generator system shall be capable of producing 35 KW, single phase, 120/240-volts at 60 hertz regardless of engine RPM. The generator shall be equipped with an automatic voltage regulator to maintain nominal output voltage (120/240-volts AC) under varying generator loads.

The generator display module shall display generator output voltage, frequency and current. The display module shall be located in the L1 compartment adjacent to the apparatus load center. The load center shall be connected to the generator system.

A PTO unit shall be provided and installed. A switch to control the operation of the PTO shall be installed in the drivers switch panel.

120/240-VOLT AC NFPA LOAD TEST

Electrical System Testing.

The wiring and associated equipment shall be tested by the apparatus manufacturer

Operational Test

The apparatus manufacturer shall perform operational test and shall certify that the power source and any devices that are attached to the line voltage electrical systems are properly connected and in working order.

The results of the tests shall be supplied to the Town at the time of delivery.

LOAD CENTER PANEL

A Square D Homeline circuit breaker panel shall be provided in the apparatus body. All breakers shall be properly labeled. The generator shall be hard wired to the circuit breaker panel. The circuit breaker panel shall be mounted so as to not interfere with shelves or trays, if specified. The load center panel cover shall be accessible with hand tools. The load center panel mounting location

shall be in the L1 compartment.

WEATHER RESISTANT TUBING

The AC wiring in the apparatus body shall be installed in seal tite weather resistant conduit.

SPARE LINE VOLTAGE BREAKER POSITIONS

There shall be two (2) spare 240-volt AC breaker positions accommodated for in the design and installation of the line voltage breaker panel. No circuit breakers or additional wiring is provided and the panel knock out will remain in place. These positions will be provided for future wiring expansion by the department.

CIRCUIT BREAKERS

Manual reset 120 and 240-volt AC circuit breakers shall be provided in the load center as required by the circuits installed by the apparatus manufacturer.

120 VAC RECEPTACLES

One 1 120-volt AC receptacle shall be provided in the upper rear of the following compartments. L1,L4,R1,R4

The receptacles shall be mounted in a weather proof box with a self closing weatherproof cover. The electrical outlet shall be a NEMA L5-15, rated at 120-volt AC, 15-amp, duplex twist lock receptacle.

240 VAC RECEPTACLES

One 240-volt AC receptacles shall be provided with the apparatus. Each receptacle shall be located in high the RR1 compartment shall be mounted in a weatherproof box with a self closing weatherproof cover. The electrical outlet shall be a NEMA L14-30, rated at 120/240-volt AC 30-amp, 4-wire, single twist lock receptacle.

CAB ICC MARKER LIGHTING

Five amber Whelen OS Series LED cab face mounted clearance lights shall be supplied, mounted above the windshield. These lights are to be mounted in a chrome flange.

Two amber Whelen OS Series LED side clearance lights shall be supplied, one (1) each side mounted ahead of the front door.

An amber diamond shaped reflector shall be mounted on the lower corner of each cab front door adjacent to the door hinge.

APPARATUS ICC MARKER LIGHTING

Two amber Whelen OS Series LED side clearance lights shall be supplied, one each side mounted ahead of the forward body compartment. These lights are to be mounted in a chrome flange.

Five red LED clearance lights shall be supplied, mounted in the rear of the apparatus.

Two red LED clearance lights shall be supplied, mounted facing the side of the apparatus.

ICC lighting utilized and lighting positions shall be in conformance with FMVSS.

HEADLIGHTS

Four (4) rectangular halogen headlights shall be supplied.

When the parking brake is released and the master battery switch is in the on position, the head lamps shall be illuminated to 80% brilliance.

TURN SIGNALS

Two rectangular Federal Signal, model QL64Z-TURN, LED turn signal lamps shall be mounted outboard of the front headlights on each side. These lights shall be amber in color.

BUMPER MOUNTED FOG LIGHTS

Two round PERLUX fog / driving lights with clear lens shall be mounted recessed in the front bumper.

SIDE MOUNTED TURN SIGNAL LIGHTS

Two (2) Whelen, model RSA02ZCR, linear amber LED turn signal lights shall be provided mounted one each side in the front wheel well area. The lights shall be mounted in a chrome flange.

REAR STOP/TAIL/TURN/BACKUP LIGHTS

The rear of the apparatus shall be equipped with Federal Signal QuadraFlare 6"x4" lights. The top light in the assembly shall be a red LED stop/tail light, Federal Signal model QL64Z-BTT. The middle light set shall be an amber LED lamp with a populated arrow shape, Federal Signal model QL64Z-ARROW and the lower lights shall be clear LED backup lights, Federal Signal model QL64Z-BACKUP.

A one-piece polished aluminum trim casting shall be mounted around the rear stop/tail/turn and backup lights on each side of the apparatus.

BACK-UP ALARM

A solid state electronic backup alarm shall be installed on the rear of the apparatus and wired to the backup light circuit.

A license plate mounting bracket and incandescent light shall be provided. The light and bracket shall be located on the rear of the apparatus.

ROOF MOUNTED LIGHTBAR

A Whelen Freedom model FN72QLED, 72" light bar system shall be supplied and permanently mounted on the cab roof, as far forward as possible. This light bar system shall be supplied with eight LED elements, six red and two clear.

All clear warning light(s) in the light bar shall be disabled automatically for the "Blocking Right of Way" mode.

LOW LEVEL WARNING LIGHTS

Two Red Whelen warning lights, 600 Series, Super-LED light heads shall be mounted on the front of the chassis above the headlights located in the inner position on each side.

The warning lights shall be programmed for Hi-power with the same flash pattern for both the right and left light head.

FRONT INTERSECTION LIGHTS

Two Red Whelen warning lights, M6, Linear Super-LED light heads shall be mounted one on each side of the cab over the front wheel with a Whelen chrome plated flange.

ALTERNATING HEADLIGHT WARNING

The headlights shall be provided with an alternating headlight feature. When the High Beam is selected the headlights shall become a standard high beam. The headlight wig wag feature shall be disabled automatically for the "Blocking Right of Way" mode.

A cut off switch shall also be supplied to turn off the alternating headlight function should it use not be desired.

BODY SIDE WARNING LIGHTS

Two red Whelen warning lights, M6, Linear Super-LED light heads shall be mounted one on each side of the body over the rear wheel with a Whelen chrome plated flange.

REAR UPPER LEVEL WARNING LIGHTS

Four Whelen warning lights, 900 Series, Super-LED light heads shall be mounted on the upper face of the apparatus with a Whelen chrome plated flange.

Two Whelen warning lights, 900 Series, Super-LED light heads shall be mounted on the upper rear sides of the apparatus with a Whelen chrome plated flange.

The warning lights shall be programmed for Hi-power with the same flash pattern for all light heads.

All warning light lenses shall be red in color.

REAR LOWER LEVEL WARNING LIGHTS

Two red Whelen warning lights, 600 Series, Super-LED light heads shall be mounted on the rear of the apparatus below the taillights at the lower outermost corners in vertical position with a Whelen chrome plated flange. The warning lights shall be programmed for Hi-power with the same flash pattern for the other 600 series light heads.

LED TRAFFIC ADVISOR

One Whelen traffic advisor, model TAM-85, shall be mounted on the upper rear of the apparatus. The control box is to be mounted in the cab allowing for easy operation by the driver.

LIGHT TOWER - CAB ROOF MOUNTED

The apparatus shall be equipped with an all electric floodlight tower. The light shall be mounted on the cab roof behind the front facing light bar.

A Wilburt NS15 (15ft. Mast) The cab roof shall be reinforced to support the light tower weighing up to approximately 180 pounds. A look-up light shall be provided. The light tower shall extend to a height of 15ft. and auto stow to a maximum height of 13.5 inches from the mounted surface.

The light tower shall have six 1500 watt / 240VAC quartz halogen Optimum light fixtures

<p>delivering a total of 210,000 lumens of floodlighting.</p> <p>The light towers functions shall including "auto stow feature " and shall be operated by a hardwired pistol grip remote that is supplied with the tower. The light tower control shall be located in compartment L1. A green strobe light shall be supplied with the light tower mounted at the highest position. A switch shall be provided on hand held control head for strobe light.</p> <p>An amber flashing Whelen OS Series LED light shall be mounted on the face of the overhead panel. A chrome flange is to be supplied with the light. The light will activate when the light tower is raised and the parking brakes are released. A buzzer shall be provided with the light. A label shall be applied adjacent to the light 'LIGHT TOWER RAISED'.</p> <p><u>IDENTIFICATION AND SAFETY LABELS</u></p> <p>A permanent label shall be installed in the driver's compartment to specify the quantity and type of all of the fluids in the vehicle:</p> <p>A permanent label shall be installed in the driver's compartment specifying the maximum number of personnel the vehicle is designed to carry per NFPA standards. It shall be located in an area visible to the driver.</p> <p>A permanent label shall show the completed apparatus overall height, length and gross weight rating (GVWR).</p> <p>An accident prevention sign stating "DANGER PERSONNEL MUST BE SEATED AND SEAT BELTS MUST BE FASTENED WHILE VEHICLE IS IN MOTION OR DEATH OR SERIOUS INJURY MAY RESULT" shall be placed so it is visible from all seating positions.</p> <p>An accident prevention sign stating "DANGER DO NOT RIDE ON REAR STEP WHILE VEHICLE IS IN MOTION, DEATH OR SERIOUS INJURY MAY RESULT" shall be placed so it is visible from the rear step of the vehicle.</p> <p><u>WHEEL CHOCKS</u></p> <p>One (1) pair of heavy duty, high tensile molded aluminum wheel chocks shall be provided with the apparatus. The wheel chocks shall have a bright yellow powder coat finish for high visibility, safety and corrosion resistance. No exception shall be allowed to these requirements. Two Stainless steel chock holders shall be provided and mounted on the left side of the apparatus below the front body compartment.</p> <p><u>ELECTRIC CORD REEL</u></p> <p>Two (2) Hannay model ECR1618-17-18 electric rewind cord reels shall be supplied and installed.</p> <p>The cable reel(s) shall be a 12-volt electric rewind type.</p> <p>The cord reels shall be equipped with a Hannay SR-50 control to provide a 50% reduction in motor speed.</p> <p>The reels shall be mounted Centered of the L2-R2 compartment ceiling and mounted one to deploy primarily to the driver's side & one to primarily to the officers side</p> <p><u>ELECTRICAL CORD</u></p> <p>Two hundred feet (200') of 10/4 SOOW (yellow) cord shall be installed on each reel, complete with an HS-3 ball stop.</p>	
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The cord reel cord shall terminate with a NEMA L14-30R, 30 amp twistlock female receptacle.

ELECTRICAL CORD JUNCTION BOX

Two Akron junction box, model EJB shall be provided. The junction box is to be powder coated safety yellow and be provided with rubber feet on the bottom of the box.

Two yellow powder coated mounting brackets, model EJB-VMT is to be shipped loose with the apparatus for final installation by the department.

The light box outlets are to be as follows:

The outlet in Location 1 is to be a

Single L14-30 125/250 Volt AC twist lock outlet with spring loaded cover.

The outlet in Location 2 is to be a

Duplex L5-15 125 Volt AC twist lock outlet with spring loaded cover.

The outlet in Location 3 is to be a

Duplex L5-15 125 Volt AC twist lock outlet with spring loaded cover.

The outlet in Location 4 is to be a

Duplex L5-15 125 Volt AC twist lock outlet with spring loaded cover.

REEL REWIND SWITCH

The cord reels shall be equipped with a weather resistant push button switch mounted in the relay enclosure box within compartment that the reel is contained.

UTILITY AIR HOSE REEL

One (1) Hannay model EF1514-17-18 hose reel with electric rewind shall be provided center ceiling mounted in the L3 compartment with operation primarily to the driver. The reel shall be capable of holding at least one hundred fifty feet (150') of 3/8" utility air hose. An electrical rewind switch shall be provided in the same compartment for the hose reel rewind. There shall be a 3/4" line from the chassis air system connected to the hose reel for air supply. The reel shall be equipped with one hundred fifty feet (150') of 3/8" air hose rated at 300 PSI. A ball stop shall be provided and installed at the end of the air hose.

REFLECTIVE SAFETY STRIPE

A 2" reflective gold x 6" reflective white 3M brand Scotchlite reflective stripe shall be affixed to the perimeter of the vehicle. The striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of the rear, and at least 25% of the perimeter width of the front of the vehicle shall have reflective stripe.

BODY STRIPE "Z" PATTERN

The stripe on each side of the apparatus shall run straight back to the body, with a reverse "Z" pattern shape on the front body door and then run straight back from there to the rear of the body.

REFLECTIVE SHELF/TRAY STRIPING

3M brand Scotchlite red/white reflective striping shall be affixed to the front face of all shelves and pull out trays.

MISCELLANEOUS FASTENERS

One (1) bag of assorted fasteners (bolts, nuts, screws and washers) of the type used in construction of the apparatus shall be provided as follows.

10 YEAR BODY STRUCTURAL WARRANTY

The manufacturer shall provide a body structural warranty to the Town for a period of one hundred twenty (120) months. The warranty period shall commence on the date the vehicle is delivered to the Town.

PRECONSTRUCTION / ORDER CONFERENCE

There shall be a preconstruction conference held at the Moultonborough public safety building with the selected bidder. To ensure accuracy, performance, operability, & reliability of the apparatus, the preconstruction conference shall be conducted by the Dealer principal who shall also be The Sales & Service engineer. This person shall have the following minimum resume to discuss the complete apparatus and accurately describe the options included within.

- EVT & ASE certified in the following:
- Maintenance, Inspection, & testing of fire apparatus
- Design & performance standards
- Fire Pumps & accessories
- Fire Apparatus Electrical systems
- Aerial fire Apparatus
- Allison Automatic transmissions
- Certified fire fighter with a minimum of twenty five years of front line & management experience
- Is factory authorized to make major & minor decisions with regards to the manufacturing of this apparatus.

To ensure a full understanding of the apparatus, this preconstruction conference will include the following practices without exception.

- Complete page by page, line by line review of the specifications and item descriptions.
- The Sales engineer & Town shall initial each page as being reviewed. Changes or modifications shall be noted in the left margin and initialed. A change order if required shall be generated by the sales engineer after the meeting and approved by both prior to submission to the factory.
- Drawing review
- Paint codes will be confirmed and entered into the order
- Paint break location (for two tone paint) & designed will be reviewed
- Hose loads shall be confirmed and documented
- Lettering & stripe locations, fonts, etc shall be documented
- Shelves, trays, tool-board, locations shall be confirmed
- Electrical outlets shall be located and receptacle type confirmed
- Titling information shall be confirmed and recorded to ensure the apparatus is titled correctly
- Town information such as points of contact, person/s authorized to make decisions and changes to the apparatus (both major & minor) shall be confirmed and recorded

- Financial Points of contact shall be confirmed
- Any open or remaining order or contractual documents if not previously completed shall be.

MISCELLANEOUS SUPPLIED ITEMS

The Town is most interested in ensuring the equipment be mounted in the exactly as it intended therefore the following shall be completed after a pre-installation meeting with the entire Town. Mounting options for all the below listed will be decided at this meeting and work shall be completed prior to delivery and acceptance to the department.

Hurst hydraulics

2ea Hurst hydraulic reels shall be removed from the current rescue on & mounted in the upper portion of RR1 compartment

1ea Hurst twin flow electric hydraulic pump shall be removed mounted and wired to the 240v circuit mentioned earlier in this spec. Note: The intended location is between the hyd reels in the upper most portion of the RR compartment with the tools being preconnected to it.

Cascade system

An NFPA compliant American air works space saver two bottle fill station shall be supplied & installed in the L4 compartment (location to be determined).

An American air works 6 bottle 6000 psi fill station with options for future installation of a Sierra electric powered booster pump shall be supplied & installed in the L4 compartment(location to be confirmed at equipment installation meeting) Note: 240v outlet needed for booster pump is included earlier in the specifications

20 SCBA storage cylinder storage units shall be supplied adjacent to the Fill station (ten each side) so as to allow for easy visual identification of full and need to be filled cylinders when using the cascade system.

The departments six 6000 psi cascade cylinders shall be reused for and installed vertically between the L4 & R4 compartments installation, plumbing from the cylinders to the fill panel shall not be reused.

RV Awning

There shall be provided and installed a 18' wide Heavy duty RV awning on the Left side of the rescue body. This awning shall have the proper installation and mechanisms to allow for deployment by an average size fire fighter (5'-6") tall. The awnings material shall be of Heavy duty type as it is intended to be used for protection from the elements year around.

CAFS system

There shall be provided and installed in the front of the body behind the vertical divider mentioned earlier in this specification a compressed air foam system. This system shall contain a minimum 60 gallon vertically mounted pressure capable storage tank that will contain the water & foam solution. This system shall be easily replenished by simply depressurizing the tank and refilling with water and batch mixed class A foam. There shall also be a compressed air cascade type

<p>cylinder with cubic footage and pressure to completely deploy the water & foam solution when both are filled to the correct level & pressure. This system shall also be installed with the proper plumbing and regulators, gauges, and controls needed to safely pressurize and depressurize the system when fire suppression operations are starting or have been completed. Included in this system shall be pre-piped hose reel. This hose reel shall contain a minimum of 100 feet of high pressure 1" hose and contain the proper nozzle to deliver a quality finished foam solution. Design and installation shall be reviewed and approved prior to installation.</p> <p><u>IN-CAB BACK BOARD /PATIENT AREA</u></p> <p>There shall be provided within the cab directly behind the dog house an elevated area large enough to place a patient of normal size 6'-0" 230lbs strapped to a back board in the cab should protection from the elements be needed while providing care while waiting for transport opportunities. (Note: <u>This is NOT a transport area</u> and is intended to be used only as stated) It shall be elevated to an agreeable height within the cab so as to allow the loading & loading of the board as well as storage underneath for equipment.</p> <p><u>EQUIPMENT MOUNTING ALLOWANCE</u></p> <p>There shall be an allowance of \$25,000.00 provided by the bidder for mounting of department supplied equipment included within the pricing of this unit. A recording shall be kept of all expenditures and provided to the Town upon request. Materials shall be invoiced at no more than the generally recognized Manufacturer's Suggested Retail Price. Further each bidder shall provide their equipment mounting labor rate</p> <p>Labor rate per hour: \$ _____</p> <p>There shall be no other mark-ups allowed.</p> <p>The Town reserves the right to omit or modify this allowance after review of the apparatus at final inspection or anytime during the process without enduring additional change order costs.</p> <p><u>LETTERING</u></p> <p>Lettering shall be provided by the bidder. An allowance of \$2000.00 shall be included within the proposal price for lettering as directed by the Town. The exact lettering layout shall be determined at the final inspection or during equipment mounting.</p> <p><u>SHIPPING OF COMPLETED APPARATUS</u></p> <p>The completed apparatus shall be driven from the factory to the dealer's location by the dealer's staff driver</p> <p><u>SERVICE</u></p> <p>Service is of the utmost importance to the department. The service center shall have the following as a minimum.</p> <p>The service center shall be owned by the factory or dealer. Third parties with no financial or other ties to this apparatus shall be deemed acceptable service centers.</p> <p>The service center shall have the ability and experience to work unrestricted with component manufactures for ease in warranty replacement parts as or if required.</p>	
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<p>Shall have been in the fire apparatus service & repair business for a minimum of twenty years</p> <p>The founder (s) of the service company shall have been in the firefighting industry for a minimum of twenty five years</p> <p>Technicians shall have been factory trained by the OEM for completing service to this vehicle.</p> <p>In order to ensure quality service, all technicians employed by the service center shall be certified EVT technicians (certifications shall be current) and the service center shall provide an ongoing EVT & ASE certification and training program. Proof of an EVT certifications program shall be included in the proposal by providing current certificates for all technicians.</p> <p>The service center shall have as a minimum:</p> <p>The ability to complete major or minor repairs to the apparatus</p> <p>Shall have a fully stocked parts room</p> <p>Shall have a fully stocked service vehicles with on the road chassis, pump, and electrical service and repair capability</p> <p>Shall have Fire, Burglar, Freeze and power failure monitored alarm systems within the service center to notify the respective department should there be a related problem with in the building with a staffed call down list.</p> <p>Shall maintain adequate insurance to protect our apparatus with aggregate limits of not less than two Million Dollars (certificates shall be provided upon request)</p> <p>Shall maintain adequate workers compensation Insurance on all workers (certificates shall be provided upon request)</p> <p>Shall be available to the department 24/7 and maintain an on call tech for the after-hours response</p> <p>Shall have a working knowledge of the departments equipment already in-service</p> <p>Shall have the ability to complete chassis, pump, pump testing, aerial service work on all of our apparatus as required.</p> <p>The service center shall have a the ability to complete paint work within their own facility this would include</p> <ul style="list-style-type: none"> A. using all low VOC paints & primer with documentation of proper disposal of all paint wastes as required by the EPA & DOT. B. A complete paint mixing station to ensure paint matches are accurate C. A breathing system for the technician <p>Shall have in their place of business the means to elevate the apparatus for performing routine & major service requirements a minimum of six feet.</p> <p>Shall have the ability to provide an as-built component list with Oem parts numbers as well as manufactures part number on the service vehicle as well as from the facility for ease in emergency replacement parts on the nights & weekends or in unlikely event it is not immediately available from the final stage manufacturer</p> <p>Shall have the capability to complete service as well as Programming changes on the multiplex electrical systems used in this apparatus.</p>		
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<p>Shall be within 100 miles from the Moultonborough Public Safety Facility. Rt 25 Moultonborough NH</p> <p><u>APPARATUS PRE-DELIVERY</u></p> <p>The Apparatus shall receive a predelivery check over & cleaning prior to final delivery to the department.</p> <p><u>FINAL DELIVERY</u></p> <p>The Apparatus once predelivery check & cleaning has been completed shall be delivered to the Town</p> <p><u>TEMPORARY REGISTRATION</u></p> <p>A temporary registration & NH inspection sticker shall be applied to the vehicle prior to delivery so as to ensure the department can start the driving portion of predelivery without waiting for title and registration documents to arrive</p> <p><u>WARRANTY INSPECTION</u></p> <p>There shall be supplied an eleven (11) month warranty inspection performed at the department.</p> <p><u>ONSITE WARRANTY</u></p> <p>The apparatus manufacture will provide "on-site" warranty repair at the fire station during the first twelve (12) months of the warranty period. If the repairs cannot physically be done at the station due to the nature of the repair, the local service center for the manufacture will pick up the apparatus for the repair and return it to the Town after repairs are completed.</p>		
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